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Signs of the Times; The Philosophy of the French Postal Strike.

THE report of the Royal Commission on the Poor Laws and Relief of Distress marks an important stage in the history of the treatment of social problems. Externally this ponderous blue book of 1238 pages bears a strong family resemblance to the long series of sister reports which have preceded it. We have at the beginning the familiar royal warrant issued to a long list of commissioners beginning with "our right trusty and well beloved Councillor, Sir George Francis Hamilton (commonly called Lord George Francis Hamilton)," etc., etc., and ending with Octavia Hill, Spinster. We have the elaborate summary of testimony and we have the minority report, a little less voluminous than that of the majority, as well as sundry memoranda, provisos and exceptions signed by individual members of the majority. A closer examination of the volume shows us at once that the commission was remarkable for the ability and standing of its members. Among them are a number of men well known in public life, economists, men familiar with the administration of the poor law, and also several women noted for their knowledge and public services. The historical foundation laid for the report is most thorough. Though since the poor law reform of 1834, nearly one hundred reports on subjects connected with the poor law have been presented to Parliament, this is the most wide reaching and thorough. It deals not only with the poor law in all of its phases but also with private charities and with the broader

industrial and commercial facts affecting directly or indirectly the volume of destitution. The commission seems to have displayed great industry. Since its appointment in 1905 it has held 209 meetings, examined 452 witnesses and received statements or replies to questions from about 900 other persons. It has also visited some 200 unions and some 400 institutions, and it has attended some 160 meetings of local bodies. It has extended its investigations beyond the boundaries of Great Britain to other countries. It has obtained valuable memoranda on such topics as unemployment, cyclical trade depressions, emigration and immigration, labor colonies, etc., from the board of trade.

Its general conclusion regarding the operation of the poor law, while not sensationally severe, is yet discouraging. The commission record that "Notwithstanding the enormous annual expenditure, amounting to nearly sixty millions a year, upon poor relief, education, and public health, we still have a vast army of persons quartered upon us unable to support themselves, and an army which in numbers has recently shown signs of increase rather than decrease." And they conclude "that something in our social organisation is seriously wrong, and that whatever may be the evils, they are not of such a nature as to be improved or removed by the mere signing of cheques or the outpouring of public funds." This last sentence is significant of the point of view of the commission. Something is wrong in the social organization, therefore something radical must be done.

The proposals cover a large range of topics from the organization of the administration to the treatment of unemployment. It is significant that the department of the local government board which has hitherto dealt with the relief of the poor should in the plan of the commission be known in the future as the "public assistance division," and this same expression, public assistance, is also to be applied to the local authorities. The whole method of assistance is to be less mechanical and more specialized. Hence the general workhouse is to be abolished and special institutions for special classes of cases are to be created. Emphasis, however, is laid upon the fact that "the treatment of inmates should be made as far as possible curative and restorative." But the report does not stop with public agencies. It also

provides for coöperation with and supervision of voluntary movements for relief and suggests the desirability of some kind of invalidity insurance and insurance for unemployment. The minority report is like that of the majority in emphasizing the causes of poverty lying in the environment, but recommends much more radical measures for dealing with it, including the creation of a ministry of labor with six subdivisions, each under its own assistant secretary.

Not far from the date of the appearance of this report the periodical published by the Charity Organization Society of New York, under the title of "Charities and the Commons," changed its name to the "Survey." This name typifies the broader treatment of pauperism which has for some time been emphasized in the pages of this review and which is resulting in so many valuable investigations of social and industrial conditions. This change in the point of view of those engaged in administering charity is significant and hopeful. It indicates an appreciation of the interaction of social and economic processes without which we are liable to grope in the dark. And yet a certain danger may arise from pushing this point of view to an extreme, when we come to the practice of poor relief. More of the causes of poverty may be social than we have hitherto assumed, but there is danger that, if the mind of the administrator is constantly directed to the social influences, he will overlook those personal defects whose social causes are so remote as to have no immediate bearing on practical problems. Take the familiar case of a man who drinks up his earnings and is habitually destitute. Society may perhaps be at fault for not having safeguarded his youth or educated his father and mother, but this fact does not make it the less necessary to deal with him by methods which, as far as possible, shall put him under a pressure to conquer his weakness. That the old-fashioned vices of laziness, improvidence and intemperance are not always due to poor surroundings is seen by the fact that we find them even among those of independent fortune. In these cases they do not lead to public dependence simply because the laws of inheritance or the kindness of friends prevents this result, but the evils are moral in one case as in the other and must be overcome by moral influences.

Social movements in France are usually kaleidoscopic in the most literal sense of the word. At any instant of time they present a picture, highly colored, perfectly symmetrical and consistent, seemingly designed with mathematical accuracy. But a slight turn in the course of events destroys the old picture and gives us a new one, equally symmetrical, equally consistent and equally brilliant in color. The strike of the French Post Office employees has advertised to the world the latest of these social movements. There are doubtless specific abuses in the civil service which have caused discontent and led to a movement on the part of the employees, but the real significance of the strike lies in their demand of the right to form a trade union or *syndicat* and to ally themselves with the *Confédération Générale du Travail.* This is something very different from such an organization as the American Federation of Labor. The French *syndicats* were originally planned on the English model, but what is now known as *syndicalisme* has departed very widely from the trades unionism of England and the United States, which recognizes in the main the existing system of production, and merely aims to secure better conditions for those who are working under it. Compared with old-fashioned trade unionism French *syndicalisme* might be considered socialistic and yet it is so much more extreme than socialism, as commonly understood, that it has separated itself from the other bodies of French socialists. It has much in common with anarchism. Indeed Pouget, one of its leading exponents, was at one time an anarchist, and yet it is quite opposed to the extreme individualism which lies at the base of the anarchist theory. *Syndicalisme* has this in common with both socialism and anarchism that it is the enemy of so-called capitalism, but it differs from socialism in that it is opposed to state action. It places no faith in the government, still less in achieving results by means of political parties. It even opposes democracy. In the words of Pouget, "Syndicalism and democracy are two opposite poles which exclude and neutralize each other." Hence the means adopted by it are summed up under the general term "direct action." This means a constant and persistent warfare of organized labor, not aiming at arbitration or collective bargaining, but simply at the undermining of capitalism. Accordingly, their

principal weapons are the label, the boycott, *sabottage* and the strike. By *sabottage* the French understand any means by which the worker can deprive his employer of the results of his labor, whether by spoiling work already done, by loafing on the job, or by doing the work in a clumsy and inefficient manner. But the culmination of their action is in the general strike, which is regarded, not as a means of securing advantageous conditions of employment, but of expropriating the owners of capital and killing the goose that lays the golden egg. As is often the case in movements of this kind, the negative part is more emphasized than the positive. Indeed, it is always easier to tear down than to build up.

But the picture would be incomplete if it did not contain a sketch of the future ideal society, and with perfect consistency this society is to be built upon the trade union. The *syndicat* is to be the organic cell of society. It is apparently expected that when capitalism is once paralyzed the trade unions will enter into their inheritance, seize upon the existing means of production and manage them. The fact that only a fraction of French working men are organized and that of those organized in turn only a fraction belong to this group does not trouble its philosophers in the least. They say openly that it is the duty of the minority to put into operation the measures which the majority is still too dull to understand.

The movement in its present form is not very old. Indeed, the General Federation of Labor was not formed until 1895, but Pouget is quite right in claiming as one of its ancestors the International Workingmen's Association. The same spirit of destruction which inspired that association and the *Commune* inspires the *Syndicalistes* of the present day. The same element which in 1871 built barricades and set fire to the public buildings of Paris still exists and would doubtless repeat the history of that time, if occasion offered. It is significant that one of the anti-military organs is called *"La Guerre Sociale."* The government is, therefore, not dealing with a simple strike. It is dealing with part of a deliberate, carefully planned, revolutionary movement. The outcome would seem to depend in part upon its firmness in meeting this movement, in part upon the combination that the next turn of the kaleidoscope will display.

SPAIN SINCE 1898.

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LET us refrain from discussing the why and wherefore of the destruction of the *Maine*. Americans and Spaniards hold completely opposite opinions on the subject, and others who desire to discuss it will take either the part of Spain or that of the United States, according as their sympathies tend in one direction or the other. The facts are that that cruiser, sent by the government of the United States to take part in some celebrations in Havana, was destroyed as the result of an explosion, on the night of the fifteenth of February, 1898; that this incident severed relations between Washington and Madrid; and that the Spaniards embarked upon an unequal war although they clearly foresaw the epilogue which developed on the third of July following. The protagonist on the Spanish side has just died. Perhaps with his death has been extinguished the little light which might be shed upon certain events in the last throes of our colonial empire. Those living pages of history which, one by one, are disappearing, carry with them the secret of our calamities; and we must, from now on, admit these disasters, without any discussion, into the category of accomplished facts.

A blow of this nature could not but have unsettled Spain; the fall of one of the strongest colonial powers in the world is not a light thing. But from this severe lesson Spain drew very valuable instruction; and the country, ill-treated, bruised, drained of men and money after the catastrophe, is commencing to live again—and that through its own energies. Is it on this account to be inferred that the loss of the colonies was a blessing for the

Spanish nation? It is very difficult to answer this question categorically, but in general we may give an affirmative reply. For the Spanish poor, Cuba and the Philippines stood for a cruel chastisement to which their sons might be destined by the lot of the military draft; to them the service meant great peril, for, if they did not die in the colonies, they were sure to return with health impaired by the tropical heat and unfit for labor. For the incapable and idle class of society, the colonies were the consolation of disappointed ambitions. With powerful influence one attained results which would have cost great efforts in the Peninsula, and, once in the "satrapía," the attainment of results was only a question of tightening the screws before being removed from office—which was sure to happen in a short time. Thus there was a continual flux and reflux of applications and of new appointments for all classes of life, from the university professor to the collector of taxes. Worst of all, such office-holders were allowed, when, after the loss of the colonies they returned to the mother-country, to enter without examination into positions equivalent to those which they had held across the sea. For this reason popular literature has fixed upon them the significant epithet "ultramarinos." They believed that they had a right to repair their fortunes in the mother-country; some of them have succeeded in so doing and have thus distanced those who by priority or by merit had better rights.

The ruling class, which had not taken part in these cabalistic alliances, looked with displeasure upon this hotbed of sordidness which, as they saw, constituted a most terrible social gangrene. But, believing that they would be unable to avoid many of the evils, they folded their arms; and their sin of omission was as reprehensible as was that which the others committed in deed. Upon mature consideration, therefore, it cannot be doubted that, once the initial stupor and spasm which the catastrophe produced had been thrown off, the liberation of Cuba and the Philippines was the beginning of Spain's regeneration. They brought us little good, for their rich incomes remained in the hands of the administrators, only a small remnant reaching the public treasury; on the other hand, they were responsible for a lengthy chapter in the volume of the public debt. And the worst of the matter

is that the ineptitude of some, or the demands of others, brought it about that "free Cuba" became free in every sense of the word—that is to say, it shifted off on Spain its share in the general debt of the nation. Yet to the cry of the colonies, "At last independent!" the Spaniards could answer, "At last free!" as if the loss of the insular domains had relieved them of a heavy load.[1]

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It would not be a venturesome contention that in many of the mistakes of the campaign was mingled the vehement desire to sustain and defend Spanish institutions; for the sake of the latter definite concessions were made and certain exigencies accepted. *Everything because of and for the sake of the throne,* was the motto of the politicians; and only thus could they save a situation as unstable as that of the Regency in the sad days of 1898. And, in truth, the government has had few crises as grave as that one. It was saved, not so much by the political skill of those at the head of the government as by the division of the Republicans and the exaggerated idea of patriotism held by the reactionary parties: the former never attained unity of ideal because of their division into many groups ("Unitarios," "Federales," "Gubernamentales," "Radicales"); while the Carlists obeyed a leader who sacrificed to the love of his country the favorable occasions which events offered to his cause. Only thus did the throne maintain itself firmly, as the diagonal of two equal and contrary forces, until the coronation of Alfonso XIII, May 17, 1902, and his union

[1] But these abuses, which, on a greater or smaller scale, are to be found in all countries, are very far from being as bad as described by Chancellor Andrews in the chapter "The War with Spain" in "The United States in Our Own Times, 1870-1903," pp. 799-800. "Unlike Turkish atrocities in Armenia," he says, "or Belgian outrages on the Congo, Iberian fire and sword in Cuba, so near, concerned the United States immediately and deeply. . . ." And later, describing the social state of Spain, he says: "Spain was an abject spectacle, misruled, soldier-ridden, torn by Carlism and anarchy at home, grappling at tremendous outlay of life and money with two rebellions beyond the sea" (p. 804). It is lamentable that such a worthy professor has not endeavored to inform himself fittingly upon a point which he judges so lightly, and in history *ne quid falsi dicere audeat, ne quid veri non audeat.*

with the House of England in 1906 so strengthened the government that it is at present in a condition of fair stability. Nevertheless, it is not, even now, what it was in the time of Alfonso XII, nor yet in the period of the Regency. Then the popularity of a king, or the pity which was extended to an unfortunate lady, brought about a current of sympathy with those supreme representatives of the nation. To-day personal factors of this order are disappearing, and the *res publica* (*cosa pública*) interests the politicians more and more.[2]

Politically, Spain possesses four great guiding forces: "Conservadores," "Liberales," "Republicanos" and "Carlistas." Of these only the Republicans and the Carlists have a clear and definite programme, and it may even be said that only the latter have a real watchword. Indeed, so great is the diversity of opinions between the Republicans and the Carlists that they are able to effect little, though they control what is numerically a strong minority (thirty) in the Cortes. The Conservatives and Liberals are the governmental parties of to-day, and they, thanks to a system of alternation, or turn-about, succeed each other in power in accordance with the royal will. But the curious thing about these political aggregations is that they do not have a clear and definite creed or political programme. The Conservatives of to-day are the Liberals of yesterday, for they, thanks to an evolutionary movement of the Left, found themselves on the Right, and were given the name of "reactionaries." However, the Liberals, who now and then use "radicalism" and "anticlericalism" as watchwords of their party, forget their promises when once in power, and in the majority of cases continue the policy of their predecessors. In spite of all, however, in the general method of administration, Spain is being regenerated. Opposition or agreement, for example, has brought about guaranties of stability to the public functionaries, thus doing away with the multitude of unemployed persons which each change of government used to bring. The type of

[2] We may note the last crisis of the Maura Cabinet, in which the royal will and the opinion of the President of the Council of Ministers were at cross purposes in regard to the nomination of the head of the "Estado Mayor Central" (Central Military Staff), as a result of which disagreement the Ministry resigned.

"cesante" (dismissed public officer) is becoming more rare every day, and it is to be hoped that this evolution, having thus commenced, will end by completely destroying the type.

The life of the provinces has gained a great impetus in the last few years: Barcelona, Bilbao, Valencia, Zaragoza, Valladolid, etc., are establishing new industries and opening markets within and without the kingdom. However, the character distinctive of each of these provinces and the necessity of defending special interests causes a certain spirit of discord or rivalry to exist between them. Barcelona, for example, an industrial province *par excellence,* needs to import the greater part of the raw material for its manufacturing, and so a high tariff system would be the ruin of the Catalan region.[3] Valencians, on the other hand, whose greatest resource is agriculture, are comparatively indifferent to tariff questions, for their prosperity depends in great part on rates of exchange. Owing to the depreciation of Spanish currency they are able to sell their products in foreign markets at a premium which offsets the cost of production and handling.

This especial nature of the various regions gives them also very marked political tendencies. In the centers of industry the body of laborers is Republican or Socialist (Barcelona and its neighborhood, Madrid, Valencia, Zaragoza, Bilbao, etc.).[4] The country people, on the contrary, are for the most part reactionary, although private interests, or the pressure of proprietor upon tenant, may be determinative of the farmer's vote.

The political education of the citizen is coming more and more into evidence, and with its advance the influence of the "cacique"

[3] The Catalans are so zealous in their desire for a lower tariff on raw material that their activity contrasts with the apathy of the other provinces. The "Centro del Fomento del Trabajo" (Bureau for the Encouragement of Labor) is supplied with great sums to pay the commissions charged with tariff revision. Thus they have succeeded in placing upon foreign finished products high duties protective of local production.

[4] It is possible that this is also due to the difficulty which the people have in understanding the intermediate parties. The laborer is Carlist or Republican; thus it was evident in the last elections that the same towns which elected Republican deputies possessed, according to the census, a very considerable nucleus of Carlist forces. Valencia, for example, a town of 230,000 inhabitants, gave this result: Republicans, Unionists and Federalists, combined, about 17,000; Carlists, 5,000; intermediate parties, altogether about 6,000.

(political "chief" or "boss")[5] is growing less, so that at present the regions in which the will of the latter dominates are very few. A new political power has been constituted since the loss of the colonies, and has been greatly augmented in the last elections: "la solidaridad," the principle of solidarity.[6] This is the concentration of diverse political tendencies of a section for the defense of its interests against a policy of centralization. Nowhere has the central power been so hated as in Spain, an effect, without doubt, of the heterogeneity of the nation's component parts. A Catalan does not desire to be classed with a Galician or an Andalusian; a Valencian or a Murcian is very different from a Navarrese or a Basque; and the diversity which exists in the legislative system in regard to privileges accorded to the various provinces,[7] has had the hardihood to show itself in the political system. It is undeniable that there has been a certain abuse of centralism; but it is also evident that both the Basque and the Catalan sectionalists have made exaggerated demands. If these should be granted, national life would become impossible; the State would turn from a centralized into a federal State.

The municipal administration is not without its blemishes. The mayor, as absolute master of certain favors, should be of faultless morality for the honest accomplishment of his rule. Frequently it is to be observed that this office, as also that of "concejal" or

[5] One of the most curious sociological studies is that of the "cacique." Feared by the great and the powerful, frequently of but little education, but of a cunning sagacity, an entangler of the clearest questions and an interpreter of the most difficult, the "cacique" manages and upsets the government of a province. Mayors, governors, deputies, high and low officials, all owe to him their posts and are his instruments, going from ministry to ministry, dancing attendance, while at home in his little corner the "cacique" with a shrewd imagination prepares the strokes of local politics. The province of Castellón, which elects seven deputies, was managed by a kind of committee called the *cosi*, directed by a person of the middle class.

[6] There are two localities in Spain in which sectionalism reaches its apogee—Catalonia and the Basque provinces. In Catalonia there was formed a combination of Republicans, Carlists and Catalanists, which "cornered" all the political posts of the region. In the Basque provinces the sectional movement has Separatist aspirations.

[7] Aragón, the Basque provinces (Guipúzcoa, Vizcaya, Alava), Navarra and Cataluña, are the regions which enjoy privileges.

"edil" (member of a municipal council), which is a stepping-stone to the office of mayor (except in Madrid), is held by a man of the middle class; for the well-to-do classes show a complete indifference with regard to taking part in the municipal administration.[8] All these defects, as well as, to a certain degree, the tendency toward home rule in the various sections, are about to be remedied by the law dealing with local administration which the Maura Cabinet has presented for the approval of the Chambers. By this enactment the various regions will enjoy a certain autonomy, and the representation by classes will give more guaranties to the administration of the municipality. Although the opposition parties made this law the target of their political programme, the previous public debate and the amendment of some of its articles have put it into a condition to be approved by a majority in the Congress of Representatives, and to be discussed by the Senate.

In the social system and in the matter of protection for the laborer, Spain is also trying to make progress by passing measures which shall be able to guarantee liberty of labor and the regulation of the same, in order to avoid the harmful abuses of excessive competition. It is very true that the greater part of the laws come to us from France, but the laws will be sound and good, if the copy be like the original and the latter be not contrary to equity. With this object Spain began by the creation of an Institute of Social Reforms, which includes in its membership not only distinguished sociologists,[9] but also delegations of laborers and employers elected by vote from their respective classes in legally constituted associations. In this way the great social commotions which suspensions of work or strikes

[8] This indifference leads to frequent crookedness, under the pressure of life's necessities and the temptation of money. Inadvertently, without doubt, and with the best intentions respecting restitution, certain mayors sometimes incur expenses and take funds which they are then not able to make good. Incriminations or denunciations oblige the Governor to send a delegate for visits of inspection, and it is noticeable, in such cases, how the councils manage to account for all items. Before a prospect of this nature, a certain mayor did not hesitate to make good a small deficit under the following entry: "For a trumpet for proclamations, 300 pesetas."

[9] Among others we may mention Señores Azcárate, Dato, Mella, Posada, Buylla, Aznar, etc., etc.

produce in the centers of labor are to be prevented; in this way wages, working-days and hours of labor, the labor of women and children and the other issues which may present themselves in the social system are to be regulated. Moreover, the Institute is a kind of censor of all those measures of the government which possess a social character—a censor to which those who believe themselves injured in their rights may have recourse.[10]

Emigration before and just after the war assumed alarming proportions, depopulating those provinces of Spain which possess the highest birth rate.[11] Often the emigration was well ordered, but still oftener the unwary peasants, under the hallucination of enriching themselves, and always dreaming of the golden legends which the popular imagination has created in regard to the "Indianos" (adventurers who return rich from America), set out by entire families,[12] without any guaranty of work and in such manner running the risks which are inherent in the hard beginnings of the struggle for existence in a strange territory. The government could not oppose this without restricting individual liberty, and in the districts of the northwest and in the principal ports[13] from which the emigrants embarked, a multitute of emigration agents swarmed, promising abundance and work which did not exist at all. The authorities, the press and the labor societies cried out against this exodus, which was depriving Spain of hands for cultivation. The internal colonization and emigration statutes aim to remedy, if not to prevent, these evils; by the former set of laws facilities are provided for the establishment of agricultural colonies which may encourage the cultivation of certain products and repeople the most deserted

[10] Lately it has had to intervene in the question of cessation of labor, and of the closing of wine-shops on Sunday. In the latter instance arose the following curious situation: the greater part of the labor societies protested to the Institute because the wine-sellers had petitioned for the repeal of a law so harmful to wine-selling interests.

[11] Galicia, the Asturias, Santander and the Basque provinces contribute the greatest contingent to emigration. Moreover, the Galicians and the Asturians go to Madrid to obtain positions as "serenos" (night-watchmen), sweepers and water-carriers, of which classes they constitute more than sixty per cent. They have the reputation of being sober and economical.

[12] There were towns which emigrated *en masse*, even to the priest and the apothecary.

[13] Barcelona, Santander, Coruña, Almería, Málaga, etc.

districts. But these intentions are necessarily very difficult of realization, on account of the fact that, in several regions where there are real *latifundia,* property is virtually monopolized.[14]

However, a taste for agriculture is at present developing; modern cultivation is being introduced in almost all the provinces, the Roman plough is being replaced by the plough with a modern mould-board, and machines are working with better results lands which until now have been as good as lost. The government patronizes annual expositions of cattle, of machines and of agricultural products, institutes fairs and encourages by certain privileges those who dedicate themselves to the selection and betterment of Spanish products. It must not be lost sight of that agriculture, with its affiliated occupation, cattle-raising, and the exploitation of mines constitute the most abundant resources of Spain, and it is on them that Spain's future depends. But, for the encouragement of the one and of the other, the State is in need of certain means which taxation should supply, and taxation, up to the present time, has been very unequal and imperfect. In the case of land-owners, although the small proprietor, unable to evade the law, finds himself bearing the weight of heavy taxes, the proprietors of large landed estates or of mines can easily hide their riches; for the tax is usually levied after personal declaration, and the State does not possess adequate agencies of investigation. Since the cadastre is imperfect and incomplete, the result is that more than a third of the wealth, not being inscribed in the books of the registration of property, escapes the exchequer. The same thing happens in the case of the mines, and here the matter is of more importance, for the richest and most productive mines are in the hands of foreigners. Although the government puts a high tax upon each ton of extracted mineral, there are many corrupt practices employed to evade the legal decree. Right after the war many mineral deposits showed an unwonted development, causing some towns[15] to grow in the manner of American cities. But with

[14] The greater part of Estremadura and Andalucía is made up of great agricultural estates, leagues and leagues in extent, whose owners, since their lands yield a sufficient return, neglect to work them intensively.

[15] Bilbao, Santander, etc.

truth came falsehood, and along with the productive ore-deposits were worked others which were unproductive, or were ore deposits only in name; these projects, initiated for speculative purposes and to facilitate stock-jobbing operations, caused great ravages and were productive of grave crises—crises from which we are only now beginning to recover.

It is not surprising that the proletariat leads a miserable and narrow life, and is often obliged to emigrate to other provinces when the sudden paralysis of some industry, or an agricultural crisis caused by drought,[16] results in a superabundance of workmen. To counteract this phenomenon, which prevents the farming class from saving money or leaving home to attain welfare in some other place, the government has tried to find a remedy by surrounding with legal guaranties the arrangements which private initiative has undertaken; for this purpose have been instituted and disseminated syndicates, coöperative associations, savings banks, and banks for mutual aid, which lend at a low interest, payable in money or products (seeds, working-implements, raw materials for fertilizer), the farmer being able in this way to cope with calamities. For the superintendence of these societies, and to combat the alarming proportions which usury was attaining, the government has created the "Instituto Nacional de Previsión," which aims to regulate small loans and to encourage the habit of economy.

Militarism, again, is one of the evils from which we yet suffer in Spain. When the colonies had been lost, and the troops which we had been maintaining across the sea had been brought home, the budget was increased to a great degree by the sums necessary for pensions and retirements. The disastrous end of the campaign surrounded the army with an atmosphere of unpopularity which it certainly did not deserve. But the Ministers of War, on the pretext that the armed forces must be maintained at the height of modern effectiveness, have more and more

[16] These crises are very difficult to obviate, no matter how much care be given to the installation of reservoirs or systems of irrigation. Such operations are very difficult, because all the rivers of Spain are of very deep bed, and do not easily lend themselves to purposes of irrigation. Besides, the forests are disappearing more rapidly every day.

augmented the items of expense. The war budget, sometimes on account of credits for new artillery, sometimes on account of expenses of mobilization, weighs heavily upon the Treasury, and the devices of the Ministers of the Treasury calculated to free it from these expenses have not been effective. Although at present the troops are reduced below the former figure—a situation resulting largely from personal discharges which reduced the battalions to less than three hundred men—the items of the budget are the same; and, to cap the climax, when everyone had given up thinking of the naval power that should be ours in the distribution of the forces of the world, the present Ministry proposed to rehabilitate our squadron by voting fabulous sums—appropriations which, in spite of the fact that the disbursement is to be made in successive fiscal periods, are absorbing a great part of the budget. Spain should not at this moment think of this kind of rehabilitation, which deadens so much the living energies of a country. But it may be that, though Destiny has at last, by the loss of the colonies, placed us in a condition to attend to internal development and the education of the national spirit, diplomatic combinations or external policy have assigned to us a rôle[17] which we are to fulfill at the cost of the greatest sacrifices.

In the international system we stand for little or nothing. Although for the attainment of priority or primacy in an issue of a question right and justice without force are impotent and receive no consideration, there are facts which do not depend upon force; geographical position, or the precedents of tradition, are sometimes strong enough for the defense of certain principles and for the support of definite claims. Yet we were eliminated from the Moroccan situation; the epilogue of the Act of Algeciras, in which Act Spain appeared as the equal of France—France and Spain being the sole guardians of Morocco—has finally put us entirely out of the matter, inasmuch as Germany and France have made an agreement of joint sovereignty in the dominions of the Sultan. But we must not, just because we admit that slight consideration was given us in an affair in which we should

[17] England desires, perhaps, that Spain should maintain a naval establishment, in order that the contingency of a future European conflagration may be forestalled.

have played the principal rôle, soil the glory which statesmen may win in such matters. It is comforting to think that the Maura Cabinet has acted with the greatest circumspection in the attempt to prevent Spain from being the instrument of the combination or intrigues of other governments; for the abstention from an armed intervention coincident with that of the French saved us from expenses and follies, the sole fruit which General d'Amade has obtained for his nation. If our geographical and historical position give us indisputable rights to action in Morocco, we must not proceed by means of bayonets, which only silence hatred by armed oppression, but by a pacific penetration which may make us first the allies and then the instructors of a people which, like the Moroccans, is so lacking in civilization. For this we need to be in a condition to make our labor fruitful; we need to arouse our national spirit, to educate our people, to wake the moral forces which lie dormant in our citizens; and this is to be attained only by attending to the encouragement of culture and furthering its dissemination.

Has the government concerned itself with the leading of opinion in this direction? Unfortunately it must be confessed that to-day Spain is, as regards education, bereft of the protection of the Spanish powers-that-be. In spite of having a special department—the Ministry of Public Instruction and Fine Arts—we make no progress, and the Ministers fear to undertake a reform of so much consequence, and which is to influence so radically the formation of the Spanish spirit. At most they dare to change those branches of teaching which are least in need of change, for instance the "Institutos"[18] and the Universities; and if some Ministers have thrown themselves into these modifications with nothing short of a monomania, the only result has been to make worse certain institutions. It is clear that a complete reform demands appropriations a hundred times greater than those which are now assigned to this branch; but, granted this necessity, everything should be subordinated to it, and an attempt should be made to raise the mentality of the country in order that we may not suffer the shame of figuring in the

[18] These are similar to the French "lycées."

statistics of illiteracy in the same class with Russia or the Balkan States. In Spain there is still held the atavistic idea that instruction is one of the prime functions of the State. Yet the budget of instruction hardly amounts to $400,000; and that too, although of late years the minimum salary for teachers in the elementary schools has been fixed at $200.

But, in order that instruction be profitable, its two most important elements have to be in a state of perfect balance; the teacher in a condition of fitness for the accomplishment of his mission; the pupil with a propensity toward study and an eagerness to learn. On the contrary, it often happens that an unskillful person, without sufficient preparation or adequate practice, takes upon himself the most difficult function to be found in the social system, often without inspiration for it. And, if he has the predisposition, he finds himself thwarted by lack of means; there are teachers to whom is allotted, for the scientific material of a whole school of more than a hundred students, the sum of forty dollars. What can the most earnest man do in the face of such obstacles?

The pupil, when he appears, is completely lacking in education, and it is necessary to begin by inculcating in him the most elementary rules of common politeness; and these he will practise only while he is in class, for when the session is ended, he will go back to lose in the atmosphere of his home what the anxious care of his teacher may have taught him. And it is just this pupil who is of the people, of the lower class, of that class which forms the social body; for whoever is able goes to a private school, or a religious boarding-school. The classes, in other words, are separated in their education; and of this distinction is born an inevitable mutual hatred and envy.

In the writer's opinion, the most important social issue which presents itself in Spain lies in the need of convincing the people of the benefits which instruction can bring them. This is a most difficult task and demands firmness; for the resistance which families make to sending their children to school is such that only a law threatening them with punishment can make them yield. Is it not truly discouraging to go through the fields or villages and see children of seven or eight years of

age tending cattle or aiding their fathers in the tasks of the field? But these peasants, young as well as old, are rough and rude; and the answer to the complaints which are made against such sluggishness is: "Why does one have to learn his letters if he is going to be a farmer?" The boy becomes a youth, and then laments his ignorance—but it is too late; there has arrived for him the season for earning his daily bread, and now comes the period when, in very truth, he cannot spare the time. He must submit to a lifetime of labor, and, living only in fanaticism and superstition, bring up a family without any experience of his own to aid him in instructing his children.

Families which can make some effort send their sons to the "Instituto." In general the latter present themselves without sufficient preparation, and there they follow, course after course, a multitude of curricula, from the humanities and the exact sciences to physiology and agriculture, in a hurry to get through, and urged on by their own families in order that they may soon acquire the title of Bachelor and cease to be of expense. But question one of them about any point of the matters which he has studied! He has scarcely had time to look into the books! And so, in this state of ignorance, students appear for the purpose of continuing their studies in the University. How will they be able to deal with many questions which presuppose solid elementary instruction? This is the state of our system of education. Truly sad and discouraging is the spectacle offered by a people to whom a function of such importance appears so unimportant; and vain are the continual lamentations of the cultured class, if their complaints find no echo with the authorities, and unless by means of sensible regulations love for culture and a desire to learn be encouraged.

This is the only possible means of regeneration. Let us look beyond our frontiers, if it seems advisable, for institutions which may serve us as models; but yet let us not allow ourselves to be carried away by the harmful spirit of contempt for everything that is national. Spain has at its disposal an indigenous element which is very sound, and very ripe for education, if the processes which are employed do not violate its nature. Let us take a model, but let us adapt it to the Spanish temper, in order not

to prejudice the people. If we have been great in history, and if Destiny has reduced us to impotence, let those experiences which are to be gained from misfortune be fruitful, for only thus are they good and wholesome. Fate often brings two rivals face to face in such a manner as to show, in the better conditions attained by the one, the possible dawn of the other's rehabilitation: *fas est ab hoste doceri.*

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INDUSTRIAL LEADERSHIP.

IT has grown to be a fashion, nowadays, to seek to explain economic and social phenomena by reference to the physical environment. If the geographer is asked to account for the distribution of the extractive industries, which produce the raw material of the world, he has no hestitation in affirming that they thrive in one locality or fail in another because of conditions which are geological or geographical or meteorological. We do not mine gold in Florida, or raise oranges in Alaska, for reasons that are obvious. Are the physical factors of equal importance, or of decisive importance, in determining the success of manufacturing industries? If a manufacture could prosper only in immediate adjacence to the source of supply of its particular raw material, this would certainly be true. In a discussion of the subject in the Twelfth Census we find a number of examples to illustrate the importance of nearness to materials in determining the location of prosperous manufactures: "the paper industry near the spruce and poplar forests; the tanning industry near the chief tanning materials; slaughtering and meat packing near the stock-raising centers; the manufacture of agricultural implements near the great hard-wood forests and the iron-producing centers; the pottery industry near its clay; the recent growth of cotton manufacturing near the cotton fields; and the beginnings of shoe manufacturing in Massachusetts near the supply of leather." The list is interesting, but it is not impressive. Some of the examples in the list are questionable; the shoe industry might have developed anywhere but in Massachusetts, if it had depended merely on a supply of leather; and the pottery industry is emancipating itself from the clay fields, as witness the complaints of the English potters that their raw material is being taken from them by foreign rivals. Of the industries mentioned only one is of world-wide importance, that of cotton, and a striking feature of the cotton industry is the fact that most of the world's cotton yarn and cloth are manufactured thousands of miles from the fields where the cotton

was grown. Granting the importance, moreover, of the rise of the cotton industry in the South, we find another cause than the supply of raw material to be the important factor in its development—cheap labor. Australia and the Argentine Republic send their wool, and China sends its silk, to the other end of the earth to be spun and woven. In the great metallic industries, as in the case of the chief textiles, modern manufacturers are bound to the source of their supplies by a most elastic thread. Wares in which copper is the chief element are manufactured anywhere but in Montana or in Arizona, while the iron industry does not even smelt its ore at the mines. The ores of Spain and Norway are carried to England and Germany, and the Pennsylvania furnaces are fed with materials from Michigan that have been transported a thousand miles.

One raw material, however, has nourished not one or two, but practically all manufactures, since the origin of the factory system, and stands in such a vital relation to modern industrial efficiency that it deserves separate consideration; this material is coal. We may talk about our water power, and the energy to be derived from the tides and the winds; we may discuss the possibilities latent in the solar heat, or in radium; but we must recognize that as a matter of fact we have developed our industrial system to its present efficiency, and maintain it in working order, only by means of the power of coal. Long after machinery of a modern kind had been set in operation and the factory system was an established institution, the civilized world remained in a condition of comparative poverty, struggling for a bare livelihood, because it had not yet learned to get from coal the energy that is in it. Our present affluence dates from about the middle of the nineteenth century; prosperity began then because then first the steam engine had become a normal and regular factor, in manufactures, in railroads and in ocean navigation.

It is indeed a fact, as we scan the industrial conditions of modern countries, that those which have been noted for their success in manufactures are all well supplied with coal. Inside those countries, however, the factories are grouped in no immediate dependence on the coal beds. Belfast, in northern Ireland, carries on flourishing manufactures, not only of linen,

for which the raw material is furnished by the surrounding districts, but also of iron ships, the supplies for which are carried from all parts to be worked into shape. New England, distant hundreds of miles from coal fields, is one of the great industrial districts of the United States, competing with its strongest rivals in textile and metal manufactures, in spite of the freight bills which it has to pay on fuel as on other materials. On the other hand, countries like European Russia or like China, which are endowed with good coal fields, have made but the first steps in the process of industrial development. Cheap coal is a decided advantage, unquestionably, in the growth of modern manufactures, but it is by no means a decisive advantage. With it some people accomplish nothing; without it other people rise to the first rank.

In summing up my own impressions as to the influence of physical factors on industrial efficiency, I must say that I am surprised, not at the greatness but at the smallness of their importance. The time has come to raise a protest against the geographers who think that they give an effective explanation of a large part of modern industrial phenomena by reference to physical conditions. Commerce and industry are carried on not by stocks and stones, but by human beings. Take the world at large and the differences among the men on its surface are far greater than the differences of the weather above them or of the earth beneath them. Much more depends on the way in which men fashion their instruments, and the way in which they use them, than on the materials of which instruments may be made. The king's son, with a broken sword, will turn the tide of battle when common men will drop the best Toledo blade in flight.

I look, therefore, to the people rather than to the countries to explain the conditions of success in modern manufactures. Perhaps this is the natural attitude of the economist as opposed to the geographer. But in seeking in human nature and in social organization the causes of industrial efficiency, I believe that we must depart from the traditional views of the older economists and look for other things than those to which they chiefly directed attention.

Suppose, to make the matter definite, that we imagine a typical factory employing, say, one thousand men, and analyze the groups into which the thousand fall as we study their functions and the contributions which they make to the successful operation of the whole. We shall find most of the employees tending machines. They did not design these machines and they did not make them; they do not repair them when they are out of order, and they rely upon others to make all but the simplest adjustments which regulate their operation. They do not furnish the power, and in most cases they do not determine the speed. The calls upon their strength, manual skill and judgment are reduced so low that they can be considered rather servants than masters of the machines which they tend. They put in rough material and take out finished work; they oil the bearings, watch the process, stop the machine if it does something which they were told it must not be allowed to do, start it again when the cause of offence has been removed. Such are the mass of factory laborers.

A second class, far less numerous, certainly less than one-tenth of the whole number in an ordinary factory, is of a higher grade. Men of this class require often manual skill, always good technical judgment, for to them are referred all the difficulties which are out of the common. They arrange and adjust and repair the machines, and devise the means by which the minor technical problems of the factory are solved.

In the office, as on the floor, most of the employees can be ranged in one or the other of these two classes. But in the office we find a few men performing functions so different and so important that they must be made a class by themselves. Even if the few men shrink to one, he is worthy of his separate class. The third class is composed of leaders, men who do no manual work, who have often little or no technical skill, who seem to the casual observer to do nothing but read and talk and smoke. It seems as though they might perfectly well be shorn of limbs and trunk, and reduced to a bare combination of the organs of speech and sight and hearing, so far as their relations to the business go. One more organ they would need, however, the brain; for they are in a sense which is almost

literal the brains of the concern, and without their directing thought the activity throughout the factory would soon become meaningless.

We do not need the lesson of Æsop's fable to recognize that all these classes are necessary to the successful operation of the modern factory. In the sense that each is indispensable each is equally important. Still, it may prove on examination, that representatives of one or another of these classes have contributed in different measure to the development of manufacturing industry in different periods and in different countries. Such I believe to be the case, and I shall attempt to suggest that the rise of manufacturing depended, and that the prosperity of manufactures still depends, on the class of leaders rather than on that of laborers, whether these last be unskilled or skilled.

Why was the factory system established in England a generation or more earlier than in the other countries of Europe? Were the English laborers of the eighteenth century more intelligent, more docile, in any way better fitted to factory work than Germans or French or Italians? I have seen no evidence to support this view. The early factories in every country drew their workers from the nooks and corners in the preceding organization of handicraft and agriculture, and secured everywhere a dull and shiftless lot of operatives, forced into factory work by pressure of various kinds rather than tempted to it by an opening for any peculiar talent of their own.

The explanation commonly accepted for the rise of the factory system in England would ascribe it to the influence of the inventions of improvements in textile machinery and later in the steam engine. A difficulty in the way of accepting this explanation lies in the fact that inventive genius had been at work for generations and centuries before the industrial revolution, in other countries as well as in England, and still had availed not at all to move industrial methods from their old rut. The invention of the stocking frame, in the time of Elizabeth, is but one of many examples of important technical improvements which fell dead because in their time there was no business leader competent to take them up and carry them through to practical success. When Col. Colt and another American visited St.

Petersburg, just after the Crimean war, they found displayed in the museum there, among the machines constructed for Peter the Great, a lathe for turning irregular forms, which was worth a fortune in the middle of the nineteenth century, and another lathe for copying reliefs, which had just been reinvented and was attracting much attention at Paris. Inventive genius is the monopoly of no one country and of no one period. Like other forms of genius it appears sporadically, even in the most unlikely environment. The spark flashes. Will it flash and go out, or will it kindle to a flame, destroying the rubbish of the old system and giving energy for a revolution in methods and results? The inventor is helpless to determine that issue; it lies in other hands than his.

A striking feature in the history of the industrial revolution, to him who reads it with a mind unclouded by the older theories, is the slight influence of inventions and inventors on the course of industrial development. Inventions were supplied readily enough by carpenters, millwrights, watchmakers, even by clergymen, when the demand for them was apparent. The demand for invention, a perception of the possibilities in machinery and an ability to realize these possibilities in practice: those were the characteristics of English life toward the close of the eighteenth century which were lacking in other countries and which gave England her start as the "workshop of the world." The great figures among the early manufacturers were those of men who had often little or no technical ability. The greatest of them all, Richard Arkwright, was a barber's apprentice and an itinerant hair merchant, who invented nothing, but merely stole the ideas of others. Bad as he was, and coarse and unattractive as are the personalities of most of the other great figures in the field of the factory industry of the time, the economist must recognize in these early manufacturers the pioneers of a new period of civilization. They were the first great business leaders of the modern world.

In a sense they contributed no new element to the industrial organization. The manual labor on which they depended had always existed. Inventors of far greater technical ability than they had been long at work on their various devices. Merchants

and bankers had for centuries been developing the methods by which the wares of commerce and the world's capital could be made most effective. They first essayed, however, the task, gigantic both in its difficulty and in its possibilities, of combining in their own brains the characteristics and the functions of all the classes which before had worked in separate spheres. Not laborers themselves, they created the modern labor force by organizing and disciplining it from its scattered elements. Lacking as they were in invention, they still must recognize its possibilities and stimulate and guide its originators. They must be partly merchants, that they might develop their markets; partly bankers, that they might attract the necessary capital for the expansion of their business. These men were captains not over tens or centuries, but over thousands.

This view, that industrial efficiency depended, in the period of its beginnings, on business leaders rather than on the character of the labor employed, or on the contributions of technical experts, could be supported, if time permitted, by an abundance of evidence. That it is true still of the present organization will be apparent, I think, to anyone who considers the conditions of manufactures in one of the leading industrial countries to-day.

Why does the United States stand so high in certain manufactures: iron and steel, machine tools, brass, shoes, some lines of textile work? Is it attributable to our physical resources? In some respects we certainly do possess advantages over our competitors, though I think, as said above, that the importance of our superiority in this respect has been exaggerated. The character of our advantage, in so far as it is geographical, has often also been mistaken, for it is derived at least as much from our political as from our physical geography. The mere area of a district such as ours, unbroken by tariff barriers, has stimulated an internal commerce in comparison with which our foreign trade is almost insignificant; and this internal commerce has enabled us, in a sense, to pool our resources, so that each may be used to help develop another, and so that resources of an ordinary kind may in this coöperation appear to be extraordinarily rich. Our iron industry, for instance, has depended more for its development on the cotton fields of the South and

the grain fields of the Mississippi valley than on the ore supplies of Michigan.

Still, after all concession is made to the claims advanced for our geographical advantages, I think that we must seek elsewhere for the chief element in our prosperity. Is the efficiency of American labor the solution of the problem? That has long been a current view, and appears to be supported by the statistics of labor cost which are supplied us in such profusion. An agent of our State department, for example, reported in 1888 that the labor cost of a pair of women's button boots was at Lynn, Mass., $.35, at Berlin, Germany, $.57, at Leicester and Stafford, England, $.61 and $.64. In such a comparison we see the reason for the common assertion that American labor is more efficient than foreign. Let us, however, examine a little further into this so-called American labor. It dissolves into Scandinavian, German, Bohemian, French-Canadian, as we approach. It is really foreign labor at work on American soil; it is exactly the same labor which our foreign competitors have at their disposal. We may allow something for the stimulation of the American climate, and something for the higher grade of living common in this country, though recent researches into the physiology of nutrition make one inclined to doubt whether the food of our factory boarding-houses makes for greater efficiency than the simpler and less abundant fare of the European factory workers. Yet, on the whole, I should be inclined to accept the opinions of competent foreign observers, that our labor is not particularly good in quality and works no harder than in the old country. If we continue our search for "American" labor until at last we actually do find it, in the cotton mills of the South, what becomes of our boasted superiority? We do find there, it is true, a low labor cost, but achieved by methods which are European, almost Russian, in character; child labor, long hours, low wages, a low standard of living—things which we like to think are the reverse of American, and which we are glad to know do not prevail in most of our manufactures.

The superiority of American labor is a popular fiction which veils our really decisive advantage, our class of business leaders. Laborers produce much more in this country than in others, not

because they themselves are better, but because they are given better instruments to work with, are organized to make the most of their merits and the least of their defects, by the directing minds above them. Let us quote from a speech by George Westinghouse, made at a dinner in London in 1903. "In America," he said, "we have always been short-handed with regard to labor. We have been obliged to find methods whereby one man may accomplish the work of two or three men as compared with your practice here. We have had the best men from Europe: Englishmen, Germans, French, everybody—skilled men, highly trained men, as well as laboring men; we have combined their experience with our own, coupled it with our necessities, and have thus accomplished results unattainable in a country like this, where you have more labor than you can well keep employed."

Westinghouse is celebrated as the originator of the air brake and other new devices, and the mention of his name suggests the possibility that the leadership which has made some American industries so efficient has been technical in character, that of inventors rather than of the business men whose importance I emphasized in discussing the rise of modern manufactures. Famous as he is as an inventor, Westinghouse has, however, been equally remarkable and important in the ability that he has shown in the practical development of the inventions not only of himself but of others. The same may be said of Edison. Aside from the phonograph, few inventions of importance can be ascribed to the personal genius of the "Wizard," and the great contributions that he has made resolve themselves into the inventions of nameless employees, working under his direction. In the case of most of our great factory leaders, it is unnecessary to stop even for a moment to discuss the character of their leadership; they have dealt with men, not with materials, and have won their success by availing themselves of the technical and manual ability of others.

Only since the Civil War have manufactures of first rate efficiency been established in the United States; and this fact, a subject of bitter complaint to our fathers, has turned out actually of great advantage to us now. The Americans entered

on this last period of industrial development unfettered by the traditions of a successful past, and trained in the adaptability which the exigencies of their life imposed upon them. They have made their own opportunities, and in spite, rather than because of American labor, have won in some fields the primacy of the world. If they produce steel in the Pittsburg district at half the cost in other countries, and still pay double the wages, they owe this result not to the efficiency of their employees but to the fact that they have contrived to dispense with so many employees. If they compete in the markets of China with the cotton goods of England, it is because they have learned all that England could teach and more than the English manufacturers were willing to learn. The Northrop automatic loom, which atones for the deficiencies of our labor in New England and the South, was an English invention which was neglected in the country of its origin, and which was developed into an industrial success by the enterprise of American business men. They struggled long in vain to establish metal-working industries, but so long as they followed European methods and depended, as they must, upon the skill of imported foreign laborers, they were at a hopeless disadvantage. They succeeded only when they developed machines and methods which they inspired with some of their own brain power, and freed themselves thereby from dependence on brains in their laborers. The American metal worker, current opinion to the contrary notwithstanding, is far less skilled in manual operations than his fellows in Europe. In such work as chipping, filing, hand-turning and the like, he cannot rival the English or the German. Even France turns out specimens of metal work which rouse the admiration and the envy of American workmen, as appeared a few years ago when the Pennsylvania Railroad imported a French locomotive for trial.

The modern world of industry, however, measures instruments not by the pains and skill which they have cost, but by the results which they will return for a certain price. American manufacturers have accepted that standard and have developed a whole new system upon it. The American factory is a marvelous example of organizing genius. In the office every device is employed that will economize the brain power of the few who

have good brains, and will enable them to oversee and direct the operation of a great business. Messengers, stenographers and clerks of every variety relieve the leaders of physical exertion and the strain of routine work. Systems of accounting and filing, initiated by men of thought but administered by men whose only virtue is the cheap one of steady habits, present always a trustworthy summary of the conditions of the business, by which the leaders may shape their policy. In the works, as in the office, the same methods are employed by which the few brains of quality may inform and direct the quantity of cheap and common men.

One means to this end is the "standardizing" of the factory's output. The factory attempts no longer to suit the industrial taste of every customer, by making a ware to answer his personal needs. It selects certain types, which seem most generally serviceable, and turns out many articles of a kind instead of articles of many different kinds. The customer may grumble, for he, Smith, does not want exactly the same product that is made also for Brown, Jones and Robinson. He grumbles, but still he buys; for though he could secure something to suit his individual fancy, if he were willing to pay the old price, he finds the new product well enough adapted to his purposes, and for the price at which it is offered a bargain too attractive to be declined. The price of the product is low because brains have been saved in the making of it. A man of real intellectual capacity, a man in a thousand, has determined the operations by which an article of this particular kind may be most efficiently manufactured; he originates the processes (or more often secures technical experts to develop them for him), arranges the instruments and supervises the operation. A man can do this for one or for a few articles; he cannot do it for thousands. His brain would be unequal to the strain of that; he would have to delegate the responsibility of determining the course of manufacture to men of a lower order, and they, as they have always done, would follow blindly the traditions of the past, without thought of the possibilities of the present and future. A village blacksmith, earning perhaps two dollars a day, is worth to the world no more than that, for he is spending most of his time

on work which a two-dollar man could perfectly well do. Yet this same man may have in him the making of a great industrial leader, doing work which is worth ten or a hundred thousand dollars a year to him and more than that to society, if he be placed in a position where he can use his brains and direct a little army of manual workers in the execution of his thoughts.

More than one American factory has been saved from a failure impending under the old system of manufacture by a leader who has had the courage to restrict the output from a hundred or more different kinds of articles to two or three, and who has thus been able to make his brain power tell by concentrating it, instead of dissipating it without result.

When it is possible the leader will embody his reflections in automatic machinery, which for an indefinite time and with the unbending severity of steel and iron will represent his intelligence and will repeat his conclusions. Such machinery, operated by boys and girls and thoughtless men, will turn out products which only the most skilled manual artisan could match at a hundred or a thousand times the cost. There is a limit, however, to the use of automatic tools, and in most factories, as for instance in the case of metal-working shops, there is the need of a number of general utility tools—lathes, planers, millers, and the like. To adjust new work in these machines requires some skill and judgment; when the work is once adjusted the operation of the machine is simple. If but one article of a kind is made, as in a jobbing shop or in some bit of repair work, the cost is necessarily high. In the usual factory, however, production in quantity is an essence of the business. Even if only a few score pieces of a certain kind are wanted, and for their production it would not pay to have a special automatic machine constructed, the work is not turned over to the ordinary lathe or planer hand. The American factory manager would regard it as a bit of gross extravagance to employ, even in connection with such general machinery, workmen whose intelligence and judgment would fit them for something better. The sample piece of work is given to a man who has real technical skill and who commands a corresponding wage, the toolmaker, and he devises for the machine an attachment which is especially

adjusted to this particular bit of work and which relieves the machine attendant of responsibility. So again, the demand on the brain power of the operative is reduced to its normal low level, and as before, he screws and unscrews, pushes and pulls the lever; the finished pieces come out as planned, while the toolmaker is already busy over a new device, which will supply the intelligence lacking in still another operative.

The best evidence of the decisive importance of leadership as a factor in American industrial efficiency is furnished by the attitude of our European business rivals. They have long been sharers in our rich physical resources, taking from us what they needed of cotton and wheat and copper, and paying for carriage over the extra distance of water and land sums so small that they are almost negligible. They supply us with "American" labor, instead of asking it of us. Only in a few instances have skilled artisans been drawn back to the old world for the performance of certain operations. Our consul at Birmingham reported some years ago that a number of tube welders had been imported from the Pittsburg district, to work in England and Scotland, but such cases are decidedly exceptional.

They can dispense with our resources and they do not need our labor, but in recent years they have shown the keenest desire to learn our methods of leadership, and in a number of instances have gone so far as to import from this country our leaders, ready made. We might refuse to accept the opinions of the British workingmen in the Moseley commission, who ascribed our success to the agency of American employers, but when we find British and German business men giving practical expression of the same opinion, we may well revise our views on the reason for our industrial efficiency, and may study more carefully than we have been accustomed to do the conditions determining the rise of industrial leaders in this country and the influences which may be employed to develop them in quantity and in quality.

CLIVE DAY.

Yale University.

THE NEW YORK STOCK EXCHANGE AND THE PANIC OF 1907.*

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THE events of the late panic are still recent and it is perhaps too soon to trace exactly the development and the relative importance of the different influences which brought it about, but through the fact that many of these influences were most clearly seen by the public at large in their effect on the stock market and the call money market in New York, the Stock Exchange—that is, stock exchange speculation—has come to be regarded as having had much to do with bringing about the crisis. This sentiment has crystallized in a desire to regulate and restrain speculation in general, but particularly as it is carried on in the several exchanges.

It is, of course, recognized that the over-expansion which preceded the panic was world-wide. It is my view that in its American phase it was general; that it existed in all fields of commercial and financial enterprise and that it was even greater in other quarters than in the established security markets. The natural resources of our country and the energy and initiative of our citizens had resulted in a wonderfully rapid industrial development. But a country, like an individual, can go ahead with safety only so fast as its capital permits, so that when spurred on by the wealth of our natural resources we committed

* Address delivered before the American Association for the Advancement of Science, at Baltimore, December, 1908.

ourselves to a rate of development which disregarded a proper proportion between capital and business operations, it had become only a question of time when the forces of contraction would make themselves felt.

An examination of previous crises, which have affected financial and industrial conditions in a broad way, shows them to have been brought about by an over-expansion of a general character and never by local influences.

Economists agree substantially on the important phenomena of a crisis-producing condition. Burton enumerates them in his book, "Crises and Depressions," as follows:—

1. An increase in prices of commodities and later of real estate.

2. Increased activity of established enterprises and the formation of many new ones, especially those which provide for increased production and improved methods, all requiring the change of circulating to fixed capital.

3. An active demand for loans at higher rates of interest.

4. The general employment of labor at increasing or well-sustained wages.

5. Increasing extravagance in private and public expenditure.

6. The development of a mania for speculation, attended by dishonest methods in business and the gullibility of investors.

7. Lastly, a great expansion of discounts and loans and a resulting rise in the rate of interest; also a material increase in wages, attended by frequent strikes and by difficulty in obtaining a sufficient number of laborers to meet the demand.

Every one of these indications was present, not a single one was lacking during the period preceding the panic of 1907.

The New York Stock Exchange represents in many respects the best market for securities in the world. The ideal of such a market is freedom for the transfer of securities in the most simple and convenient manner, with the least possible friction and the fewest possible restrictions consistent with the protection of the rights of the owners and dealers in securities. In these respects the New York stock market is far superior to the London market, or to any of the continental markets. It conforms more closely than those markets to the economic

principle that capital should be free to move without friction where it will, because it provides for a daily test of the value of securities and the ability of persons dealing on the Exchange to execute their contracts. In London, where the system of fortnightly and monthly settlements prevails, this test is not so rigidly applied. On the continent of Europe, where all sorts of governmental restrictions fetter the free movement of capital and the competition of individuals—even to arbitrary prohibitions from time to time against the great sheet anchor of a disturbed market, short sales—it is obvious that capital does not enjoy freedom of movement.

It is my purpose to demonstrate that the stock exchange speculation was not responsible for the over-extension thus clearly indicated in 1906-7, but that the immobilization of capital occurred in enterprises different in character from those dealt in on the Exchange.

One of the proofs that stock exchange expansion and contraction had run their course before the panic of the autumn is the exhibit of transactions on the Exchange for a series of years preceding the breakdown. The following table gives the number of shares sold on the New York Stock Exchange and their total value from the years 1903 to 1907 inclusive, together with increase or decrease as compared with the previous year:[1]

	Transactions in shares, Millions.	Increase or Decrease %	Total Value, Millions of Dollars.	Increase or Decrease %
1903	161		11,000	
1904	187	+6.1	12,061	+9.1
1905	263	+40.2	21,295	+76.8
1906	284	+8.0	23,393	+9.9
1907	196	—31	14,757	—36.8

From the year 1903 to the year 1906, the total number of transactions increased from 161 to 284 million shares, a gain of 76.4 per cent. The total value represented by these shares was, in 1903, 11,000, and 1906, 23,393 millions of dollars, a gain of 112.6 per cent.

From 1906 to 1907 a great contraction took place, reducing total transactions from 284 to 196 millions, equivalent to 31

[1] Financial Chronicle.

per cent., and the total value from 23,393 to 14,757 millions, equivalent to 37 per cent. approximately. The significant fact is, however, that this shrinkage had already begun early in the year and would have been much greater but for the number of shares thrown over in the March panic. The sales in January fell from 38,500,000 shares in 1906 to 22,700,000 shares in 1907, and in February from 21,700,000 to 16,500,000. Then came the heavy transactions in mid-March, which advanced the record for that month from 19,500,000 shares in 1906 to 32,200,000 shares in 1907. Even with this phenomenal increase, which can certainly not be ascribed to speculation for the rise, the first quarter of the year showed a decline in dealings from 79,700,000 shares in 1906 to 71,400,000 shares in 1907. The second quarter, ending June 30, showed a decline from 68,700,000 shares in 1906 to 44,800,000 shares in 1907, and the third quarter showed approximately the same decline from 74,200,000 in 1906 to 40,600,000 shares in 1907.

Note that all these changes took place before the trouble in the Mercantile National Bank, which led to the general panic. In other words, liquidation had been effected upon a large scale in the Stock Exchange without causing serious failures, and the market may be said to have been at a level even below the normal and indicating no sort of speculative expansion. If the general business of the country had been sound, the stock market would probably have remained for a time quiescent and begun to move slowly upward under the beneficial effects of the liquidation—as in 1904.

Evidence that the expansion on the Stock Exchange was much less in 1907 than in previous years is afforded also by the amount of securities admitted to listing. The significant figures, of course, are those of issues for new capital, and, to some extent, of old issues listed for the first time. The issues to replace old securities, sometimes called refunding, or in Europe "conversions," while always of interest, are less significant than new demands for capital. Taking new capital alone, it appears that issues for the year 1904 and 1905, whose combined issues of bonds were almost exactly $1,000,000,000, showed much greater demands for capital through the Stock Exchange than the year

1906, in which bonds listed were $303,000,000, or 1907, when the listings were $246,000,000. Under the head of stocks, the listings of 1904 and 1905 together were only $246,000,000, which were almost equalled by the figures for 1906, which were $237,000,000. The year 1907 showed issues of $159,000,000. None of these figures is very startling, and they do not compare with the stock issues of the years from 1899 to 1902, which afforded a total of about $1,290,000,000, or more than $320,000,000 per year.

As further evidence that over-speculation on the Stock Exchange was not among the panic-producing conditions, it may be mentioned that no bank or trust company failed because of loans on or investments in stock exchange securities.

We may be quite certain that if over-extension had existed in stock exchange speculation, it would have shown itself in one or all of these items. But I think we can agree that the examination of these indicates in no uncertain manner that there was no over-expansion in stock exchange speculation. I shall now attempt to show that there was, however, over-expansion in other directions.

Perhaps the most striking evidence of the relatively small part played by operations on the Stock Exchange in the inflation of the last two years before the panic, compared with the marked over-expansion throughout the country, is afforded by the character of the loans made by national banks. A classification of these loans is made each year by the Comptroller of the Currency for the date of one of the autumn reports of condition made by the banks. The classification does not differentiate absolutely between stock exchange loans and commercial and other types of loans, but it suffices to give a fair idea of the situation. The loans and discounts of the national banks are divided by the Comptroller into five classes. Three of these, consisting of (1) loans on demand secured by the paper of one or more individual or firm names, (2) loans on time, secured by similar paper, and (3) loans on time, in the form of a single name paper, principally represent commercial loans. The other two classes are loans "on demand, secured by stocks, bonds, and other personal securi-

ties," and "on time, secured by stocks, bonds and other personal securities, or on real estate mortgages or other liens on realty."

Of the two latter classes the first is the only one which clearly falls within the classification of stock exchange loans. The second obviously involves loans of many other types, including undoubtedly a considerable amount loaned on unlisted securities for other purposes than stock exchange operations. So far as the loans of the national banks of New York are concerned, however, both classes might be accepted as falling within the range of stock exchange loans without impairing the force of the comparison I wish to make. This comparison shows that practically the entire expansion in stock exchange loans ceased with 1905, and there was a sharp curtailment of such loans in the following two years. The amount of demand loans of this type by the national banks of the city of New York showed the following progression in comparison with total loans:[2]

LOANS BY NEW YORK CITY NATIONAL BANKS.

Date.	Demand Loans Secured by Stock, etc.	Per cent of Total.	Total Loans.
September 15, 1902	$263,775,891	43.5	$607,058,485
September 9, 1903	281,438,758	44.6	631,565,824
September 6, 1904	392,180,054	48.5	807,264,702
August 25, 1905	385,652,014	47.9	805,665,012
September 4, 1906	292,251,532	41.4	702,051,037
August 22, 1907	251,867,158	35.3	712,121,059

This table shows that from the year 1902 to 1906 the increase in demand loans secured by stock collateral increased 10.6 per cent. compared with an increase in total loans during the same period of 15.65 per cent. From 1906 to 1907 demand loans *decreased* 13.4 per cent., which more than wiped out the previous increase, whereas total loans scored a further *increase* of 1.42 per cent.

These figures seem to clinch the argument that it was not expansion of stock exchange loans at New York in 1906 and 1907 which caused the crash of October in the latter year. If there had been undue expansion of stock exchange loans, it was brought to an end in 1905 and such loans were contracted by nearly $95,000,000 in 1906, and by a further sum of $40,-

[2] Comptroller's Report.

000,000 in 1907—all this before the outbreak of the October panic. It is not necessary to give in detail the figures of the other class of loans by New York banks, protected by the deposit of securities and mortgages, because they show no radical increase. On the contrary, they fell from a maximum of $156,-987,276 in 1905 to $149,959,233 in 1906 and $152,414,157 in 1907.

So much for the conservative policy of the national banks of New York, so far as their loans on stock and bond collateral were concerned. Let us now turn to the loans of a similar class for the national banks of the entire country. Here we find an expansion in total loans from $3,481,446,772 in 1903 to $4,678,583,969 in 1907, an increase of nearly 25 per cent. In what respect do we find that it was caused by loans secured by stocks, bonds and other securities on demand? We find that the net expansion from 1903 to 1907 was from $717,258,621 to $832,878,479—an increase in four years of about 16 per cent., or an average of 4 per cent. a year. The maximum of such loans was attained in 1905, when the amount was $854,-115,721, from which there was a decline of $21,000,000 during the next two years. In the other class of loans secured by stocks, bonds and mortgages, the increase was slightly greater, from $655,439,130 in 1903 to $869,237,859 in 1907. The sudden increase in this class of loans of more than $50,000,000 in 1907 over 1906, however, justifies the conclusion that the loans were upon mortgages and other security not readily convertible, especially in places outside of New York, where stock exchange operations are limited in their scope.

But even taking these figures as they stand, the loans of all classes secured by the deposit of securities amounted in round figures in 1903 to $1,390,000,000 out of total loans of $3,500,-000,000, or 39.7 per cent. And in 1907 they amounted to $1,700,000,000 out of total loans of $4,700,000,000, or 36.2 per cent. The expansion of what may be considered the commercial loans, therefore, was from $2,100,000,000 in 1903 to $3,000,000,000 in 1907, an increase of approximately 43 per cent. How far they were really commercial loans, or advances upon unmarketable securities in order to promote new enterprises

and locking up capital in land, building and factory enterprises throughout the United States, must be left to conjecture. But it is obvious that at least one horn of the dilemma must be taken—either that they were due to great expansion in mercantile transactions, or the locking up of capital in new enterprises, and that they were not in either case due to dealings in the listed and marketable securities of the Stock Exchange. A comparison of demand loans against collateral with the loans and discounts of all national banks of the United States is even more convincing. The figures for the years 1902-7 are as follows:

	1902	1903	1904	1905	1906	1907
Demand loans on collateral, N. Y. City (millions)	264	281	392	385	292	252
Total loans and discounts in U. S. (millions)	3,280	3,481	3,726	3,998	4,299	4,679
New York City % of total	8.1	8.1	10.5	9.6	6.7	5.4

Or taking the loans as they stood in 1902 as 100 per cent., the following is the comparison:

	1902	1903	1904	1905	1906	1907
Demand on collateral New York City	100	106.4	148.4	145.8	110.6	95.4
Total of loans and discounts in United States	100	106.4	113.5	121.8	131.	142.6

Not only is this proof of the relatively greater degree of speculation and investment in industrial lines compared with the Stock Exchange given by the national banks' figures, but was also exhibited by the figures for State banks and trust companies, as the following figures show:

LOANS OF STATE BANKS AND TRUST COMPANIES.[a]

(Figures in millions.)

	1903	1904	1905	1906	1907
Loans on Collateral					
Trust companies in New York County	555	436	689	575	575
State banks, Bor. of Manhattan	148	162	190	220	245
	703	598	879	795	820
All Loans and Discounts[b]					
State banks, loan and trust companies of the United States	2,814	2,846	3,432	3,846	4,105
Percentage loans on collateral in New York of total loans in United States	25%	21%	25.6%	20.8%	20%

[a] Report of N. Y. State Superintendent of Banks.

[b] Report of the Comptroller of the Currency.

Or pursuing the other method of comparison and taking the figures for 1903 as 100 per cent., we have:

	1903	1904	1905	1906	1907
State banks and trust companies in New York	100	85	125	113.0	116.5
All loans and discounts, state banks, U. S. A.	100	101	122	136.5	146

One of the most evident forms of the immobilization of capital was the enormous activity in real estate of all kinds. The following figures for real estate mortgages in Manhattan, Bronx and Brooklyn, show clearly the enormous increase which occurred in this item alone. It is unfortunate that the figures for the total country are not available, as I believe they would illustrate my point even better.

MORTGAGES RECORDED.[5]

(Figures in millions.)

	1902	1903	1904	1905	1906	1907
Manhattan and Bronx	301	272	347	561	558	379
Brooklyn	60	71	108	194	165	140
Totals	361	343	455	755	723	519
Increase or decrease over previous year	..	—5.	+32.7	+66	—4.2	—28.2
Taking 1902 as 100%	100	95	126	209	200	143.5

The increase from 1902 to 1906 shown in this table was exactly 100 per cent., certainly a remarkable gain in so short a period.

One of the most indisputable evidences of the locking up of capital in fixed forms outside of the Stock Exchange is afforded by the building permits.[6] These show that, both in the city of New York and throughout the country, money was going into building in 1905, 1906 and the early part of 1907 at a rate without precedent in earlier years. Thus in Greater New York alone, not including Queens County, building permits granted amounted to $117,800,000 in 1903, $153,300,000 in 1904, $229,500,000 in 1905, and $205,900,000 in 1906. For the first three-quarters of 1907 the amount was about $150,000,000, or still at the rate of $200,000,000 per year, up to the very

[5] Real Estate Record and Guide.

[6] Bradstreet's and Constructions News (of Chicago).

eve of the panic, showing a lack of readjustment to the growing stringency in money which was promptly reflected in the Stock Exchange.

Outside of New York the progression was almost equally rapid. The figures given are not absolutely accurate, because they do not always include the same places in the list of twenty-five cities for which the compilation is made. As showing the general upward trend of investment in building, however, they are probably sufficiently illuminating for my purpose. They show an increase in building permits in twenty-five cities outside of New York from $201,300,000 in 1903, to $234,200,000 in 1904, $280,400,000 in 1905 and $307,800,000 in 1906. The figures of the first three-quarters of 1907 were $224,400,000, or at the rate of $300,000,000 per year. It is to be remembered that these figures, showing a total investment in this direction of about $510,000,000 in 1905 and $513,000,000 in 1906, with an annual rate of $500,000,000 for the first three-quarters of 1907, do not by any means represent the total lock-up of funds in this manner throughout the country. They do not include the hundreds of smaller places where a like process was going on. The table given below furnishes the details by quarters for New York and other cities during the past seven years:

BUILDING PERMITS IN NEW YORK AND OTHER CITIES.

GREATER NEW YORK.

(Three ciphers omitted.)

Year	1st Quarter	2d Quarter	3d Quarter	4th Quarter	Total
1902	$25,900	$42,800	$27,800	$18,900	$115,400
1903	27,900	38,200	27,500	24,200	117,800
1904	26,000	50,000	38,900	38,400	153,300
1905	44,800	57,600	68,100	49,000	229,500
1906	58,000	67,500	51,500	28,900	205,900
1907	41,800	69,500	38,200	26,000	175,500
1908	18,200	47,400	40,100	51,800	157,500
25 OTHER CITIES.					
1902	$43,900	$59,900	$53,400	$44,300	$201,500
1903	46,900	63,200	49,600	41,600	201,300
1904	38,200	74,700	66,800	54,500	234,200
1905	54,700	85,600	77,400	62,700	280,400
1906	66,300	97,600	77,600	66,300	307,800
1907	58,500	92,100	73,800	52,400	276,800
1908	44,100	78,200	72,800	73,800	268,900

What is the significance of these facts and figures which I have presented? These figures signify, if they signify anything, that Wall Street had been steadily liquidating and contracting for many months prior to the panic; while on the other hand, the general business of the country, as evidenced by the increases in loans, commercial paper, etc., until the very eve of the panic, continued to expand, so that when from sheer lack of capital this over-stimulation of the general business of the country had to stop, and contraction followed, there was only one place where contraction could be made, and that was upon the New York Stock Exchange, which under our antiquated currency system is the only avenue of liquidation in the country.

Capital became scarce, not merely for use in older and more legitimate purposes, such as an expansion in the general industries of the country, but moreover, for what I call less legitimate purposes, purposes which were highly speculative and which did not contain the possibility of a prompt return. The railways of the country, staggering under a load of traffic which exceeded the capacity of their equipment, cried aloud to the investing public for funds. But railway investments had been made unattractive by radical anti-railroad legislation, by the imposition of new and onerous burdens upon railway operations, by the increased cost of operation, owing to a general advance in the price of wages and materials, coupled with a decrease in freight and passenger rates which was legislated upon the railroads—the whole thing creating a situation which resulted in the undermining of confidence in railway values generally.

Then followed a sudden drop which has been shown in the ratio of net earnings to total earnings; increases in gross earnings coupled with decreases in net earnings; the reduction of the ratio of increase in net to increase in gross from the reasonable proportion of about 40 per cent. for the first nine months of 1906 to less than 10 per cent. for the same months of 1907. Yet in spite of all the handicaps, the railroads endeavored to increase their facilities to handle properly the abnormal business, and their only recourse in many instances to make these needed extensions was the practical assessment of stockholders through the issue of new stock. Is it therefore any wonder that "far-

sighted investors" withdrew from the situation, causing the first stage of liquidation which culminated in March, 1907?

Meanwhile, seeds of distrust had been generally sown throughout the land. Corporations in general became the objects of general denunciation. Some investors were attracted by the alluring promises of mining and industrial projects, from which the Stock Exchange persistently held aloof, and tied up their capital where it could not be readily recovered. Not merely did this situation exist in the case of individuals, but also in the case of banks and trust companies. When irregularities were first uncovered in certain institutions, whose methods were notoriously reckless, suspicion spread quickly to many other institutions and it was because many of these had locked up their assets in unliquid and unmarketable forms, that they were unable to meet the demands of even a small proportion of their depositors.

The mistrust in the business situation of the whole country was increased. Merchants, manufacturers and jobbers were forced to contract. They had hundreds of millions of notes, bills and various paper in the banks of the country, which were to all intents and purposes more or less unliquid and immobile. When this contraction, therefore, was in full swing, the only place where banks could make a quick realization of credits was in their mobile and liquid assets, which were for the most part made up of demand loans secured by stock exchange collateral, and therefore it was that Wall Street began to liquidate for the industries and businesses of all the country, months after it had liquidated for itself.

As we have already seen in the foregoing analysis, demand obligations secured by stock exchange collateral measure only a small part of the financing of the country. And, of course, the security markets and business in securities constitute but a small portion of the business of the whole nation. When this comparatively small market was called upon to meet the demands of all the country, excitement and panic on the Exchange were inevitable.

But this panic, with its great excitement and the tremendous liquidation which marked the closing months of 1907 on the Stock

Exchange, which was simply a manifestation of the contraction and liquidation of the business of the country, was looked upon as a Wall Street "gamblers' panic." As a matter of fact, Wall Street, the Stock Exchange, had quietly liquidated many months before.

One of the most important lessons of the panic is clearly the necessity of maintaining a free market for liquid securities in New York. Such a market can only remain sensitive to changes in economic conditions when it is free to express these changes with the minimum of friction. The bad example set by the imperial government of Germany, by the law of 1896, which practically destroyed a free market in Germany, should be a warning to this country not to imitate the experiment which has sent millions of dollars of German capital to deal on foreign exchanges, and which is now in process of radical amendment. A country without a market in which liquid securities can be readily converted into cash is a country without any safe economic barometer of the movement of capital and the demands for it, without the means of attracting and holding foreign capital, and which can never aspire to become the financial center of the world.

EUGENE MEYER, JR.

New York City.

THE NATURE OF COMMERCIAL OR ECONOMIC GEOGRAPHY.

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THE study of man, in his most primitive relations, where his life conditions are but little removed from the plane of the brute's, shows that his wants are few, and that these are supplied mainly from his immediate environment. In the progress upwards toward civilization, his wants become diversified. But natural riches are unevenly distributed over and within the surface of the earth; consequently, larger areas come to be called upon in the satisfaction of the new desires. In this and in other ways, which it is not necessary here to discuss, trade or commercial intercourse arises. It can readily be seen that its prosecution is now and ever has been a prominent factor in the struggle for existence. Its universality is marked, for in none but the most primitive society is it absent. That trade is the "handmaid of civilization" is just coming to be appreciated fully. As one has so aptly said, "Commerce and modern

civilization go hand in hand, and the history of one is the history of the other; and whatever may be the basis of civilization, commerce is the chief agent by which it has been spread throughout the world." The eminent scholar Carl Ritter had the idea well in mind when he wrote, "The study of minerals, of the distribution of plants and animals, is of little advantage aside from commerce and its uses to man. It is the interchange of the products of one region for those of another which has had, on the whole, the greatest influence on the human race."

But great as have been the advantages of trade in all ages, it took many centuries of progress to elevate it to the dignified and comparatively unshackled position which it holds to-day. Innumerable and almost unsurmountable obstacles were encountered in its development. In early times, ignorance, suspicion and prejudice held it in check. Even in our own day such factors continue to exercise greater or less controlling influences, especially in comparatively backward countries. Until the Discoveries period, the field for the prosecution of commerce was limited as compared with that of the present day. The lack of adequate transportation systems and the poor service afforded by those which had been developed, excluded all but the more costly and less bulky commodities from being carried over long distances. The losses from pirates and robbers were enormous, while the tolls imposed by feudal lords, often for services which the merchant himself had to render, were a serious check to the natural development of trade. The attitude of the governments in earlier times was such as to check the streams of commerce, in that they issued prohibitions or restrictions which protected alike the producers, the consumers and the merchants themselves. In the Middle Ages, the Church took a hand in the matter and undertook to "safeguard public morals" by imposing various restrictions, which happily have since disappeared.

Thus it appears that trade came to be considered from the standpoint of its manipulation, and a similar attitude has prevailed even until the present day, though with considerable modification, as shown in the tariff systems, commercial treaties, etc. With the growth of nationalities and of national policies,

the question of the balance of trade came to occupy the foreground, the political aspect still prevailing. In course of time, the various factors influencing the streams of trade and their constituents came to be considered, and here were reckoned, among other things, the psychology of the market, custom, and individual and race characteristics. A still broader view, that of the social scientist, would include such other factors as religion and superstition as controlling influences, at least upon the outskirts of the field of trade.

Within comparatively recent years, more or less serious attempts have been made to systematize these factors. Whatever may have been the ultimate causes of this movement, it seems clear that the great economic development which occurred during the nineteenth century had a marked influence. The unprecedented acceleration of production, the expansion of transportation facilities which opened the way for distribution in new markets, the rapid development of new lands and the increase of population have combined to bring about the keenest competition both in production and distribution. Moreover, there has developed a growing sense of the importance of a scientific study of both.[1] Probably at no time in the history of the world has the subject of commerce been more to the front, nor has the struggle between nations been keener than it now is for the control of the markets of the world; that is, for the extension of trade. National policies are dictated, at times shortsightedly to be sure, by this effort. Such being the case, it is in no way strange that in this age of scientific spirit, when an earnest effort to co-relate cause and effect is so universally commended, there should arise a conscious movement to place behind the great facts of trade the fundamental principles which govern them.

An attempt to trace out all the controlling influences would be a monumental, if not an impossible, task. Nor is it to be contended that the study would be a profitable one if carried into too minute detail. Yet, hitherto, the political and economic factors have received the greatest amount of attention. Without

[1] See Report of the Commissioner of Education for 1898-99, p. 1194.

desiring to minimize, in any particular, the importance of such influences, let us turn to a consideration of others to which, as yet, less attention has been given, but which, nevertheless, are far-reaching in their influence.

First of all, consider the general group of factors which, for the present discussion, we shall designate as *human* in character, and from which we now exclude those which are strictly economic and political. Among these may be mentioned fashion, custom, racial elements, language, religion and superstition. Besides, the work of man in manipulating the forces of nature so as to make them serve him is far-reaching in this connection. To one who has given little thought to these matters, it may appear, at first sight, to be over-ambitious to impress their importance, owing to the fact that they are less tangible than others and, consequently, more difficult to trace. But closer examination warrants such action. The volume of commerce to-day is so immense, and the whole organization of the machinery of production and distribution is so complicated, that all except the more prominent underlying causes are apt to be lost sight of. Among comparatively primitive societies, where trade relations are reduced to their lowest terms, many of the human controls over commerce are more easily discernible than they are under more modern conditions. Nevertheless, they are never absent. From reports of travelers in New Guinea, it is evident that fashion is the prime factor in determining the saleability of certain commodities. For example, white clay pipes may be disposed of to the natives with considerable profit at a certain season of the year; but the ambitious trader who returns with an abundant supply of these articles a month or so hence may find that pipes of another color, possibly brown, are in demand, and his stock becomes valueless in that market. Probably this change of fashion has behind it a combination of religious and other controls which have been analyzed in detail in a recent book on the *Folkways*. The influence of fashion upon the market for certain furs, precious stones, feathers and other types of luxuries at the present day is too well known and understood to require comment. The well-known dictum in the Roman Catholic Church concerning diet evidently accounts for

the comparatively large shipments of fish to the West Indies and the Catholic countries of Europe. Any adequate explanation of the almost total exclusion of foreigners from the trade of Tibet certainly requires the religious or superstitious element to be taken into consideration. The comparatively small importations of alcoholic liquors into Mohammedan countries is due largely to the prohibitions against their use, although the common consumption of opium is a factor to be reckoned with here. The attitude of the Chinese and even the Japanese, until comparatively recent times, toward the admission of European traders into their ports, can be understood only in the light of long-standing prejudice, or some similar racial characteristic. Social disorder or political unrest due to the lack of a strong central government is a powerful factor in retarding economic and commercial development, no matter how rich the country may be in natural resources. An extensive internal or foreign commerce for Morocco, to cite an extreme case, is inconceivable. One of the causes which help to explain the comparative ease with which certain of the European nations have entrenched themselves in the South American trade is that the colonists from Italy, Germany, France and England prefer goods manufactured in their native land, because, in their comparative simplicity, the commodities form a bond to link the immigrants to their fellow-countrymen across the Atlantic. Besides, the long-standing tendency or *custom,* as we prefer to call it, among the Spanish-American peoples to foster relations with Europe rather than the United States is a factor worthy of consideration in this connection. It is difficult for an American fully to appreciate the importance of these suggestions, because, with his native adaptability to a changed environment and his proverbial keenness in all matters pertaining to business, his purchases are determined mainly by the quality of the goods as compared with the prices. Moreover, the people of this country are eager to adopt novelties, new patterns and exclusive designs, while most peoples of the Old World are more conservative and cling steadfastly to fixed types in matters of food and dress.

Enough has been said, perhaps, to establish the contention that certain so-called human factors, in addition to the more

obvious economic and political ones, should be reckoned with in determining the fundamental principles which control or influence the streams of trade. In attempting to explain the distribution and peculiar characteristics of the raw materials of commerce themselves, the human factors also require consideration. To be sure, man had no control over the natural distribution of mineral wealth; but he has played a large part in the migration of plants and animals from their original homes. It is a well-known fact that a large proportion of the domesticated plants were native within a comparatively limited section of the Old World. De Candolle has pointed out that, of two hundred and forty-seven different species to which he had given attention, one hundred and ninety-nine were natives of the Old World, forty-five of America, and the remaining three were doubtful. In the territory now included within the limits of the United States, the only plants of commercial importance found native (excepting grasses and forest trees) were the artichoke and the gourds. The cereals, fruits and vegetables now grown in such abundance and with results that scarcely are surpassed in any part of the world, are as truly immigrants, or descendants of immigrant ancestors, as are the tillers of the soil themselves. The circumstances connected with the introduction of many species are well known, while in other cases the persons connected with and the time and place of introduction probably never will be known. The native habitat of wheat was, with a reasonable degree of certainty, in Central Asia, probably in the Euphrates valley. Following the pathway of civilization, its culture has spread so widely that now not one of the continents produces, in an average year, less than fifty million bushels. Similarly, maize, the only really important cereal indigenous to America, has been carried from its original home in the highlands of tropical America and cultivated, with varying success, not only in practically every State of the Union, but in nearly every country of the world where climatic and soil conditions would permit.

It is not necessary to multiply instances further to show that man, in his occupation of large parts of the earth's surface, has modified considerably the original distribution of many of the

commercial plants. Likewise, when we turn to the subject of animal emigration, it is found that his influence has been marked. The animals of course were, in many instances, capable of moving over extensive areas themselves; and many species left their native habitat for a new one where a favorable environment offered. In comparatively modern times, since hitherto inaccessible regions have been reached by the development of transportation systems, many species have been taken even so far as from one continent to another. We are so familiar these days with the presence of domestic animals, and they form such a large percentage of the national wealth, that one is apt to overlook the fact that they too are immigrants and owe their presence here to early visitors to the country. America's only important contribution to the domesticated fauna was the turkey. But it remained for the Europeans to tame it; for, soon after the discovery of America, the bird was taken to Europe, whence, after domestication, it was reintroduced into this country. The Old World was the native habitat of most of our domestic animals and the work of taming them was done, in a large degree, by the Aryan races. Moreover, it is an interesting phenomenon that in Europe and Asia, where the human race made the most rapid advances toward civilization, those animals which were capable of domestication, such as the horse, ass, camel and elephant, existed in a wild state. The fact that the different species of domesticable animals were adapted to different climatical and topographical areas has enabled man, in many instances, to reduce the natural disadvantages of many regions, notably in the matter of facilitating his own feebler efforts in transportation. It should ever be kept in the foreground, however, that in all the work of plant and animal migration to which man has lent his aid, he has found it necessary to duplicate, with slight variations, the natural conditions of the native region of each species. That is to say, the physical environment sets a limit to his efforts in practically all cases, if the results obtained are to be satisfactory.

Turning now to the distinctive characteristics of the various plants and animals, all are more or less familiar with the changes that have been brought about through the agency of

man by scientific cultivation of the former and by conscious breeding and selection of both. In the case of plants, the latter processes have been carried to such perfection that spineless cacti, seedless apples and pomatoes will soon cease to be wonders. In this connection, the achievements of Luther Burbank, as told by W. S. Harwood in his book entitled, "New Creations in Plant Life," are to the point. The physical make-up of animals appears to be, within certain limits, subject to the will of man. Experiments in this direction have not been carried to as great perfection among the larger and more expensive animals as with smaller and rapid-breeding species, such as mice and guinea-pigs. Still, great improvements have been brought about by crossing different breeds to get the desirable qualities. In this way, horses are bred for speed or for draught purposes; cows for milk or for flesh; sheep for length and fineness of wool or for size of body, and so on. Again, the adoption of scientific principles in feeding live stock has resulted in a marked improvement in their general character.

Thus far only incidental reference has been made to the bearing of the physical sciences upon the subject under consideration. Yet, their relation to trade and the raw products of commerce is of vital importance and far-reaching in application. And, just as one needs to call into service what we have designated as the human factors to supplement economic and political ones in an explanation of the fundamental controls over the streams of trade and their ultimate constituents, so also certain principles of the physical sciences demand consideration here. These have been grouped by some under the convenient and reasonable heading of the geographical factors. It should be stated that the interrelation between human activities and the physical environment has not been seriously considered by any large body of educationalists for any great length of time. Professor Max Eckert, the author of one of the leading works on Commercial Geography, says that the geography of mankind, understood as the science of the relation of man to his environment, has really come into existence only within the last few decades. While doubtless it is true that this idea has been developed independently in this country, still

in certain European countries, notably Germany, it has been recognized in the educational systems for nearly a quarter of a century. It is not necessary to enter into a discussion as to who should claim the honor of having developed the idea first, either in this country or abroad. Our immediate concern here is to impress the fact that the various physical features and climatic conditions of countries—the mountains, valleys, rivers, harbors, capes, temperature and rainfall—have a more or less intimate bearing upon man's life activities and, therefore, upon commerce.

A few illustrations will serve to impress the general principle. From the new view-point, a cape is no longer merely a projection of land jutting into the sea, but it becomes, perhaps, a dangerous obstacle to man in practising the art of navigation, threatening to wreck his ships unless lighthouses and buoys are placed to warn him of approaching danger; or calling forth the expenditure of millions of dollars in cutting a canal to shorten distances for traffic carriers. Again, rivers are no longer mere bodies of water flowing through the land and emptying finally into the ocean; but they are viewed as valuable assets to the nation as transporters of commerce, or, unless controlled, as dangerous robbers of fertile lands through erosion. Thus, the river Mersey is of interest not because it rises in the Pennines and flows westward to the Irish Sea, but because its waters can be utilized by man for driving his machinery, for scouring, bleaching and dyeing, and because its estuary forms one of the great highways of commerce of the world.[2] Likewise, mountains are of interest not as elevations of so many thousands of feet above the sea level, but as barriers against winds and condensers of rainfall, thus forming important climatic controls over large areas of surface. Or, they are viewed as impediments to migration, causing isolation; producers of peculiar types of peoples due to different adaptations to environment; sources of wealth on account of beautiful scenery or from being storehouses of minerals; and hindrances to the development of transportation systems until the accumulation of much capital and the demands

[2] Herbertson, Commercial Geography of the British Isles, p. 9.

of trade cause man to put forth extraordinary efforts to conquer nature.

The bearing of climate upon man and the limits which it sets to his life activities may be made apparent by citing a few extreme and contrasting instances.[3] In all cases, his adaptation is not physical, as is the case with the animals, but rather, mental. In Arctic regions, instead of developing blubber as a fuel for organic combustion as does the whale, or wool as did the ancient elephant, he builds a house of ice, since trees are not available; invents a fire-machine; likewise a lamp, to burn the oil which he gets from the blubber of his neighbors, the animals. These, also, are robbed of their furs, which are utilized to protect the *Homo* against the unfavorable environment. In temperate regions, a shelter constructed of ice would be but temporary. Forthwith man makes him an axe of stone, perhaps, and fells the trees which here nature has so bountifully furnished. From these the dwelling is fashioned and then it is covered with dirt, woven grasses or leaves, according to what the environment offers. Later he supplies himself with domestic utensils and instruments for killing game from whatever materials he finds available. If the climate is arid and trees and other vegetation are scanty, although rocks occur in profusion, the response is of another order. In such a climate, the plants develop a glazed outer covering which prevents evaporation. Likewise, they furnish themselves with receptacles in which water may be stored up against long periods of drought. Similarly, an armament of spines or thorns is developed to ward off animals which threaten destruction. The animals, also, develop similar appendages, or, in some cases, poisons to serve a like purpose. Man, on the contrary, makes no physical responses to such an environment, but the latter stimulates his ingenuity. Trees are not brought in from long distances to furnish shelter. The abundant rocks serve this purpose by being piled upon each other, or, it may be, by utilizing them for walling up the entrance to a natural cavern. Many other instances

[3] See Powell, "Relation of Primitive Peoples to Environment," in Smithsonian Report, 1895, pp. 625-37, from which the following cases have been taken.

could be mentioned showing the bearing of climate, either directly or indirectly, upon man's activities and his contributions to trade. In a similar manner, other geographical factors than those here considered are looked upon as controlling influences, to a greater or less degree, upon man's efforts to struggle upwards in the betterment of his life conditions.

It will now probably be granted that certain so-called geographical as well as human factors should be reckoned with in determining the fundamental principles which control the streams of trade. Likewise, both sets of influences require consideration in attempting to explain the distribution and peculiar characteristics of the raw materials of commerce. Evidently those of the mineral kingdom are less subject to natural controls than are those of the vegetable and animal worlds, although whether or not certain metallic and non-metallic elements can be mined profitably often is a question of geography. Again, minerals are not subject to modifications in their natural distribution, as it has been shown to be the case with plants and animals. Mineral wealth was originally distributed once for all, and ores cannot migrate or be transplanted into a new environment. Tin never will be mined in Nova Scotia nor anthracite in Bermuda. Gold continues to be gold, and iron ore of a certain type remains as such in spite of topographical or climatical changes. On the other hand, it is evident that each portion of the globe has its own peculiar vegetation specially adapted to its soil and climate. Some plants thrive best in cold climates, others in temperate zones, while many belong exclusively to a torrid environment. Many plants flourish only when a copious supply of moisture is available; others are abundantly able to withstand a long period of drought. Some grow best in the crevices of rocks, while others require a clayey, loamy, or sandy soil. Salt marshes, running streams, fresh water lakes, etc., each has its own peculiar flora. Likewise the natural distribution of animals was influenced considerably by geographical conditions. Climate sets a limit to the areas over which a species may range. For example, the reindeer could no more adapt himself to the tropical jungle than the tiger to the open Arctic regions. Again, topography and vegetation are important factors in the distribution of animal life. The wild horse and the antelope choose for

their home the open plains; wild sheep and goats, inaccessible crags on high mountains; while numerous species require the food and protection of a forest environment to suit their best needs.

It would be possible to enlarge at length upon the influence of geographical factors in the natural distribution of the flora and fauna of commerce. Without carrying the discussion beyond the appropriate limits for our present purposes, it should be noted in passing that certain of these factors have been the agents in transferring many a plant and animal from its original home to a more or less distant locality. Certain seeds adapted to aërial navigation have been caught up by the winds and wafted, perhaps from an island to the mainland, and either these, or their offsprings a few generations removed, spread later over vast areas where climatic and soil conditions permit of propagation. Ocean currents, rivers and icebergs have acted and continue to act as distributors of species of both plants and animals.

The influence of geographical factors in modifying the nature of plants and animals when removed to a new environment is marked. Different species vary greatly in their responses to such changes. If the new environment is very uncongenial, death or degeneration may result; or they may undergo some change by which they become adapted to their new abode. Certain animals, for instance, such as swine and sheep, apparently adapt themselves to a generality of conditions, while with others the reverse is the case. It has been pointed out that sheep introduced into the valleys of intertropical South America from temperate European regions came to have, in process of time, instead of their warm fleeces of wool, a coat of glossy hair better adapted than the former to the hot climate of their new habitat. Again, a certain species of dormouse does not become torpid or hibernate in its warm natural environment, where an abundance of food is available at all seasons of the year. If removed to England, however, where its means of subsistence fails during the winter season, it passes this time in a state of torpidity, as is the habit of the English dormouse.[4] Instances

[4] Zornlin, Physical Geography, pp. 132-33.

of plant modifications due to the physical environment are numerous. Certain varieties of apples grown on mountain slopes are more solid and more highly colored than the same varieties produced in the valleys below. Wheat which is grown in the Pacific coast States is different from that found in the Middle West. It has a white grain of a soft and starchy content. The conditions of soil and climate are such that other wheats, when grown in this habitat, lose their individuality in two or three seasons and take on all the characteristics of the standard white grain of this region.[5] The tobacco plant is highly sensitive and the factors of climate and soil have a marked influence upon the flavor and quality of the leaf. Even in such a famous tobacco region as Cuba, leaf of good quality cannot be grown close to the ocean, even though the soil is all that could be desired. The same is true in Sumatra, although the climatic conditions, different from what would be considered a favorable environment, are too delicate, it is said, to be detected by meteorological instruments. Also, the influence of soil upon the quality of tobacco is so marked that soils of different types, though only a few feet apart, produce entirely different grades of leaf.

Enough has been said, perhaps, to show the general view-point of the writer and to establish the contention that the physical environment sets a limit to man's life activities in the struggle for existence; and that, in explaining adequately the fundamental controls over the streams of trade and their ultimate constituents, both the so-called human and geographical influences should be considered along with political and economic factors. The study of commerce apart from the recognition and application of all these controls is futile and unscientific. An attempt to examine the streams of trade and their constituents from the point of view here set forth is what we call, with some inexactness, Commercial Geography. This name, however, is misleading. Obviously, a better name would be the controlling conditions of production and trade.

It is believed by many that Commercial Geography is a new subject. This is not the case. For the past forty years or more,

[5] Holmes, Wheat Growing in the Pacific Coast Region of the United States, p. 20.

students of geography, or of other sciences more or less related to commerce, have been giving enough and sufficiently serious attention to the study to produce text-books, although the points of view from which it has been approached are nearly as numerous as the writers. The field has been ill-defined in many cases, so that the student, having recourse to the subject for the first time, is prone to think that Commercial Geography is a smattering of almost everything. Geography, history, botany, evolution, geology, anthropology and economics are tangled together in the wildest confusion. That there are certain controls over trade has been recognized, but it appears that little attempt has been made as yet to reduce these controls to a system which has been followed consistently in the writing of the text. Instances of commendable efforts in this direction could be cited, and the failure to carry out these efforts to completion may have been due to the lack of sufficient data at hand, for reasons mentioned above.

The first extensive treatise on Commercial Geography, in the knowledge of the present writer, is that by Professor Carl Zehden, undertaken in 1868 and first published in 1871. The author was a member of the faculty in the Handels-Akademie of Vienna. By 1888, the work had passed through five editions in German, representing fifteen thousand copies, and had been translated, in whole or part, into Portuguese, Italian, Russian, Polish and English. The point of view of the author, which, it must be admitted, was more commendable than that of numerous later writers, is shown by an extract from the preface of the fifth German edition, where he says: "What the public now demand is a description of the earth; not a learned disquisition upon purely geographical problems, not an account of geographical marvels, but a plain practical description of the earth. The practical needs of the present day require geography to depict the earth as the abode of mankind, and the various regions of the globe as the spheres of action of the various peoples. It must furnish us with an explanation of the agricultural, industrial, and commercial circumstances, of the poverty or wealth of each country, deduced from its situation, its climate, the nature of its surface, the character of its people, and its animal, mineral and vegetable productions." Again, in men-

tioning his work in another connection, the author stated: "I believe that my book owes much of its friendly reception to an attempt made in it to account for the economic position of each state by its physical character and by the ethnographic peculiarities and the degree of civilization of its people."

Since the work of Zehden was first published, numerous others have appeared. The present writer has in his own bibliography no less than thirty-four books entitled "Commercial," "Economic," or "Industrial" Geography. Of these, twelve were published in Great Britain, eleven in the United States, seven in Germany, three in France and one in Italy. Probably this list, which already is surprisingly large for a comparatively new subject, could be increased if an exhaustive investigation were undertaken. Besides, several new books are known to be in preparation. The subject has been approached by the various writers either from the geographic or the monographic standpoint. Generally, the two methods are combined in a single work; that is, one follows the other. Obviously this involves considerable repetition. According to the former method, political boundaries are recognized and each country is considered, in turn, with reference to such topics as its natural resources, transportation facilities and trade. The monographic treatment involves a study of the various materials of commerce, such as cotton, wheat and tobacco, with reference to their origin, distribution (in a double sense) and utilization, considering the whole world as the field of action. It is probable that for present purposes, at least, it is best to recognize political boundaries and, as a general rule, to give each important commodity an exhaustive treatment under that particular country which leads in its production. Thus cotton, tobacco, maize, wheat and certain other farm products would be considered in detail, although with minor reference to production elsewhere, in the section dealing with the United States; coffee and rubber under Brazil; beet sugar under Germany, and so on, according to the rule established. Another improvement upon any previous treatment would be either the entire elimination or, at most, only an incidental reference to minor countries and the less important commodities, so that more attention could be given to the leading or prospectively important commercial countries and to the essential and basic

products. Hitherto, the books have been too comprehensive and overloaded with meaningless statistical data in many instances.

It may be urged that neither the monographic nor the politico-geographic method of treatment is the ideal, but that the study should be essentially regional. From the standpoint of the geographer alone this would seem to be an advantage, and were geographic factors the only ones to be reckoned with in the subject under consideration, there would be little cause for hesitating to endorse such a plan. But the study of commerce, from the view-point outlined in this essay, is dependent upon a diversity of factors, of which those designated geographic are only a part of a larger whole. Consequently, regional geography, as a part of the whole study of Commercial Geography, has, for the present at least, its limitations. Practically all the statistics of production and of trade have been and are for political areas. The whole matter of trade manipulation by means of tariffs and commercial treaties is with reference to political divisions. Consequently, it seems expedient for these and other reasons to adopt the geographic method of treatment.

In conclusion, it will be observed, from what has been said, that the study of commerce in the light of its controlling influences, as has been outlined above, is scarcely commercial according to the popular usage of the word. On the other hand, we approach it from the more scientific and unpractical side. Yet, a great deal of pioneer work remains to be done before the study can be placed upon a strictly scientific basis. Numerous specific instances of the influence of the various physiographical factors upon man; of the geographic and human controls over the production of individual species of plants and animals, as well as upon the transportation and marketing of commercial products, must be ferreted out. Fortunately, the study of regional geography is adding material to such information as already is at hand; and, in due course, sufficient data will be at hand to illuminate the study of Commercial Geography and place it upon a firmer foundation than that which it occupies at the present day.

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THE CARL-ZEISS-STIFTUNG, AN ATTEMPT TO SOCIALIZE CAPITALISM.

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INTRODUCTION.

THE economist who received his notions of the science thirty or forty years ago through the medium of the standard text-books must look back with a certain regret upon a time when economic processes were so alluringly simple. There were three main factors in production, land, labor, and capital, with business direction as a possible fourth. The landlord received rent, the laborer wages, the capitalist interest, and the manager profits. The product was conceived as being distributed among these four groups according to the harmonious action of self-interest, working through the processes of bargaining. Indeed, wages were often regarded as a simple quotient, obtained by dividing the wage fund by the working population, hence, like other quotients, it could be raised only by increasing the dividend or decreasing the divisor.

The more intensive study of economic facts and economic history which has taken place in recent years has, however, shown us that things are not really as simple as they were assumed to be. The production and distribution of wealth are influenced by many forces which are not economic in the usual acceptance of the term.

The categories themselves are not easily defined. Each of the terms, rent, wages, and interest, may mean different things, according to the form in which law or custom has cast them and according to the limitations under which they exist. Let us consider a few of the more important cases in which economic processes may be influenced or modified by other, especially legal or institutional, factors.

1. Much of the distribution of wealth does not take place under the operation of strictly economic forces at all, if we understand by them the free play of self-interest working through supply and demand. For example, the transfer of wealth from one generation to another is practically never made in this way. In rare cases it may happen that a person will buy a life annuity of an insurance company, in which case the transfer does take place through an exchange of rights. But generally it is gratuitous, determined by the will, sometimes the whim, of a testator, sometimes by the dictum of law in the case of intestacy, and always under the regulation of law, which sets limitations on the whims of testators and either prevents certain dispositions, such as entails, as a matter of public policy, or enforces certain others in the interest of heirs. Much wealth is also transferred by marriage, by gifts to children, relatives and others. All of these taken together are important causes of the unequal distribution of wealth which have nothing to do with the play of economic forces as ordinarily understood.

Even in business much goes by favor, sometimes degenerating into "graft." The line between the two is variable and depends upon shifting ethical and legal restrictions. The salaries paid to officers of large corporations, as disclosed in the insurance investigations of New York, are sometimes determined, not by supply and demand or the market price of their services, but by the willingness of persons controlling a corporation to vote themselves large salaries. What a few years ago was considered a legitimate perquisite is now treated as illicit and condemned by public opinion. The ability which the managers of great enterprises have to show their friends special favors is another instance of the distribution of wealth by other than economic processes. A railroad president who should supply his friends with coal

out of the coal pockets of his company would doubtless be subjected to criticism. Yet that same president will give a free pass, which means coal transformed by combustion into motion, with apparent unconsciousness that he is giving away the stockholders' property. Manufacturers who would scorn to ask the government to give them presents from funds raised by taxation, will besiege Congress for tariff duties which allow them to tax their fellow-citizens indirectly. More and more, however, either the law or public opinion is setting limits and raising the standard.

2. Even where the law of supply and demand has sway, there are often limitations placed upon its unlimited action by ethical standards, or by law.

a. The rate of interest in Wall Street is practically free in spite of usury laws, yet the exaction of a high rate of interest on the security of salaries is, as shown by the recent investigation by the Sage Foundation of the salary loan business, considered a shady occupation.

b. In the determination of rent we find occasional instances, as seen in the establishment of the City and Suburban Homes Company, where owners of property deliberately restrict themselves to a certain income. There is, of course, a philanthropic element here, but the point to be brought out is precisely that here philanthropy does enter into business.

c. The buying and selling of the product of the mind is always, and of necessity, dependent upon law. The property right in a book or an invention could not be enforced without a law determining the conditions. But many ideas, often most valuable ones, are handed down as a tradition from one generation to another, and often the ingenious inventor of a machine or process voluntarily relinquishes the right which the law would allow him, as in the case of the Babcock tester.

d. Profits are often limited by public opinion or law. This sometimes takes the indirect form of an increased capital expenditure. Let us suppose, e. g., that a certain enterprise yields a net income of $50,000 a year and that the investment of $1,000,000 is sufficient to do the business. In this case the stockholder gets 5 per cent. It is possible, however, that the directors might vote

to expend an additional $250,000 for beauty or ornamentation, in which case the stockholder would get but 4 per cent. The railroad companies are slowly recognizing a certain moral obligation to build good-looking railway stations in order to satisfy the public. They probably do not increase the traffic, and at best aid the finances of the company indirectly by making hostile legislation less likely. As far as it goes, this expenditure represents, therefore, a deliberate restriction of profits in the interest of the public. The difference between the railroads here and in countries like Germany or Switzerland, where they are under governmental control, illustrates this point. A great deal is spent in our country on luxuries, such as parlor cars, sleeping cars, etc., for which a direct charge can be made, but comparatively little on the convenience or beauty of railway stations, on which no direct toll can be levied. In Germany and Switzerland it is the other way. The trains are not, as a rule, as luxuriously equipped, but the railway stations are better planned and more ornamental. It is comparatively rare that a manufacturing concern in our country considers the esthetic element in constructing its buildings, but even here, where a factory is the dominating industry of a small town, money is sometimes spent on architecture or grounds, and to that extent it may be said that profits are deliberately relinquished in the interest of the general public. A corporation desiring new stock may in many States issue it at par to its stockholders, though the market price may be 150 or 200. In Massachusetts the law forces public service corporations to issue the stock at a price determined by a State commission. But occasionally in other States corporations, when increasing their stock, offer it at a price above par without compulsion of law. These illustrations show that, whether under pressure of law, or of public opinion, or from farsightedness, public service corporations are feeling a certain obligation to restrict their profits, which doubtless means a tacit recognition that some of the income is due to the environment and should, therefore, be shared with the general public.

e. In the determination of the price paid for services there is a great deal of confusion. Supply and demand hold sway, doubtless, with regard to the great mass of services which are paid

for under the name of wages. Yet even here there is probably a practical minimum determined by custom. Most people, e. g., would hesitate, even in hard times, to offer to employ people at half the customary rate of wages, though it might be for the benefit of the worker to take this low rate rather than earn nothing. With regard to the more skilled services of the professions there are often curious contrasts. Most physicians, e. g., have a fixed charge per visit, whether the patient be rich or poor. In the case of surgeons, however, it is very common to fix the compensation by individual rather than by group bargaining, and literally to charge what the traffic will bear. The multimillionaire, simply by virtue of his wealth, will ask free transportation and other favors from a railroad, but on the other hand, if his appendix is out of order, he will find that it costs much more to remove a multimillionaire appendix than an ordinary one.

3. Quite apart from limitations created by law, or custom, or ethical standards, we are learning that the actual working of the machinery of production often depends upon the legal form which the contract takes. Let us consider

a. The forms of capital contract. The capital for large enterprises is generally obtained at the present time through some kind of a joint stock company. But here again we have a great variety in the conditions under which the capital is supplied. The stockholders are nominally the owners and, therefore, have the control of the property. And yet even among them there are differences between the common and preferred stock, both as regards income and control. The writer happened to get some of the preferred stock of a certain corporation a few years ago, the common stock of which was worth very little. It turned out, however, that under the charter the common stock was given the right to vote after a certain number of years. It thus became possible for some clever people to buy up the common stock for a mere song and by means of the voting power to virtually force the real owners of the company to buy them out. This form of capital contract is calculated to encourage trickery and discourage careful business management. An illustration of the opposite is furnished by the experience of two of the smaller

commonwealths of Europe. The prosperity of the Island of Guernsey is attributed to a considerable extent to a form of loan upon real property, known by the French term *rente*.[1] This is virtually a mortgage which cannot be foreclosed as long as the borrower pays his interest, so that the interest becomes a fixed charge, and the profits all go to the worker. It is said that many people, starting without property, have through this form of loan become prosperous farmers. It is interesting to note that the new Swiss Civil Code, which has recently been adopted by the Swiss Confederation, provides for a form of loan on land known as the *Gült*. The institution is very similar to the *rente* of the Island of Guernsey, and it is said that it was introduced into the Civil Code of the Confederation because it had worked so advantageously in some of the smaller cantons.

b. When we come to the relations of labor to the employer the variety is still greater. Even under slavery, which may be based upon contract as well as upon force, we have many modifications of and many degrees in unfreedom, such as serfdom, peonage, the indenture system. Even when slavery, pure and simple, is the rule, there may be a limitation like the *coartación*, which prevailed under the Spaniards in Cuba, and according to which a slave might, by paying a part of his own value to his master, legally limit his master's property right and make it more easy to secure freedom.[2]

The wage system itself permits of an indefinite number of variants. Some years ago David Schloss enumerated nine different kinds of wage contracts which were common in England, without exhausting the subject. In certain occupations where gratuities are customary, the gratuities may themselves not only constitute the entire income of the employee, but be so large that he can afford to pay his employer for the privilege of working for him. This represents one extreme. A good historical example of the other extreme is the wage contract made between Laban and Jacob, when the latter agreed to work seven years for the former in order to get a wife, and then received an inferior article in payment, so that he had to work seven years

[1] H. Rider Haggard, Rural England, II, p. 81.

[2] Hubert H. S. Aimes, "Coartación," YALE REVIEW, February, 1909.

more to secure what he had contracted for in the beginning. Besides the indefinite number of possible wage contracts which lie between these extremes we find that in many countries certain terms are read into the contract by law. This is especially the case in countries like Germany, which since 1884 has provided compulsory insurance for certain classes of workers. This idea has spread so far that more than half of the population of continental Europe west of Russia is now living under laws which provide more or less in the way of compulsory insurance. The older wage contract may be considered as in a broad sense an insurance contract, in as far as the wage receiver, by drawing a stipulated income, is insured against the chances of loss in the business as a whole, and this principle is confirmed by laws which, like labor lien laws, give the wage receiver a preferred claim upon the property of the employer. Compulsory insurance against accident, sickness, and invalidity goes a step further and insures the laborer against loss of his own working power. In still other cases the law may intervene, not simply to add compulsory stipulations to the simple contract, but to determine the terms of that contract, or the methods of making it, with a view either to securing what is supposed to be an equitable rate of compensation or to preventing disputes. The Wages Boards and Compulsory Arbitration systems of Australia and New Zealand are instances of this. Even a purely mechanical device like the taximeter may be the means of avoiding disputes and save the wear and tear of bargaining. Whether all or any of these devices are commendable or not, is not to be discussed here. They are mentioned merely to show the very great extent to which the complete freedom of contract is hedged about by law for the purpose of preventing certain definite evils which have shown themselves in the modern industrial world. These laws do not abrogate competition. Supply and demand are still active. Both parties are still striving to get as much as they can for what they give in return. But the laws do define the limits within which this competition is obliged to act. This function of law may be compared to the effect of the channel on the character of a river. One and the same force impels Niagara and Meander. But whether this force of gravity produces a sluggish stream,

foaming rapids, or a sheer waterfall, depends upon the bed through which the water moves. The legal forms of the wage contract are the bed on which supply and demand act, and whether economic processes shall be quiet or turbulent, productive or inefficient, depends in part upon the legal channel to which they are forced to confine themselves.

The great variety in the wage contract already mentioned and the efforts which are made, not only by law but also by employers on their own initiative, to improve the relations of capital and labor, show that the industrial world is feeling around for a method of diminishing the evils which have shown themselves in connection with the wonderful productive efficiency of the past century. Some of these efforts have proved abortive, as is seen so often in the history of productive coöperation and profit sharing. Others contain an element of paternalism which often introduces new difficulties while removing some of the old ones. Among these various experiments there is one which is so remarkable, not only for the careful manner in which all of its provisions have been elaborated, but still more for the motive and theory which have inspired the inventor, that it deserves a brief description. This will be presented, not with the idea that a complete solution has been found here for the labor problem. Too short a time has elapsed since its introdution to warrant any final conclusion, favorable or unfavorable, regarding its merits, and the writer is of the opinion that many of its features would be impossible in other industries or under other circumstances. It is believed, however, that an explanation of its character cannot fail to be instructive to all who are seeking tentatively to improve conditions, and it is particularly valuable as an illustration of the ways in which the relations, both of labor and of capital, to an industrial organization may be modified for social purposes.

The Zeiss-Werk.[3]

In the year 1846, a young mechanic named Carl Zeiss established a workshop for making scientific instruments in Jena.

[3] Acknowledgment for the facts stated in this article regarding the Zeiss establishment is hereby made to Professors Felix Auerbach and Julius Pierstorff and to Dr. Fr. Schomerus, who very courteously gave personal explana-

The founder of this simple business was born in 1816, in Weimar, and was the son of a toy merchant, who incidentally had been the instructor of the Grand Duke, Karl Friedrich, in the art of lathe turning. The son had studied in the gymnasium and had then learned mechanics in several workshops before he established himself in Jena. The business, although very small, was a success from the start. Simple microscopes were the chief output, and some two hundred instruments of a rather primitive type were sold. From simple microscopes he proceeded to the manufacture of compound instruments, always aiming at an improvement, but feeling the difficulty of obtaining better results by mere empiricism. It was fortunate that Zeiss was able to secure the services at this critical time of Ernst Abbe. Like his partner, he also was a native of the little Grand Duchy of Sachsen Weimar Eisenach. He was born in Eisenach in 1840. He was the son of a spinner, but had the advantage of a scientific education, studied in Jena and Göttingen, where he took his doctor's degree, and finally settled in Jena in 1863 as Privat Dozent. He entered into partnership with Zeiss in 1866, was made extraordinary professor in 1870, but declined a full professorship in 1874 in order to devote his attention to the optical works. Abbe supplied the scientific mind which was needed to supplement the business talent of Zeiss.

It was found, however, that one great difficulty in obtaining results lay in the imperfect and uncertain character of the glass. There were practically at that time only two kinds of glass known, crown glass and flint glass, and it was difficult to get the glass-makers to experiment in the formation of other types. This important element was added by Dr. Otto Schott. Stimulated by an essay of Abbe, Schott began in 1881 extended experiments in new combinations and moved in 1882 to Jena, in order to prosecute these on a larger scale. The glassworks established there in 1884 were, and have continued to be, a distinct establishment under a separate name, i. e., Schott und Genossen, but Zeiss

tions to the writer in Jena; he is also indebted to the following works: Ernst Abbe, Gesammelte Abhandlungen, dritter Band; Felix Auerbach, Das Zeisswerk und die Carl-Zeiss-Stiftung in Jena; Fr. Schomerus, Das Arbeitsverhältniss bei der Firma Carl Zeiss, Jena; Siegfried Czapski, Ernst Abbe als Arbeitgeber; A. Winkelmann, Ernst Abbe.

had an interest in the business. The first catalogue was issued in 1886, and it contained such a large number of novelties that a new era in instrument building dates from that year.

From this time on the optical works made rapid progress. One department after another was added, until at the present day there are six different sections: 1, the microscopic; 2, the division for projection and microphotography; 3, the photographic division; 4, the astronomical division; 5, the terrestrial telescope division; 6, the division for mensuration. An account of the various improvements and inventions which have originated in these works falls within the province of the physicist and need not detain the economist. The most popular, perhaps, is the trieder binocular, the principle of which was applied as early as the 70's by Abbe. Others are the relief binocular telescope, of which the two arms are hinged, so that according to will one can either get an exaggerated stereoscopic effect, or, by placing the two arms together, look over a wall or around a corner; an instrument for measuring distances, huge astronomical telescopes, and an epidiascope which will project upon a screen either lantern slides by transmitted light, or opaque pictures by reflected light. The works have steadily increased in size and the employees in numbers. Beginning with one assistant, Zeiss had gradually enlarged his force, until he had between three and four hundred in 1888. By 1900 the number was over a thousand, and last spring it had touched two thousand, exclusive of some eight hundred employed in the glassworks. The simple buildings have grown into a great mass, filling a large city square and spreading out beyond it. These few technical and mechanical facts are given in order that the reader may understand the kind of an establishment that we are dealing with.

The Carl-Zeiss-Stiftung.

Carl Zeiss died in 1888, leaving his name to the works, and recognized as an important contributor to optical science by the University of Jena, which gave him an honorary doctor's degree in 1881. He left a son, who was for a short time only connected with the business. His withdrawal in 1889 left Abbe as the virtual head of the business, though supported ably by such

men as Siegfried Czapski, Max Fischer, and Rudolf Straubel. He retained this position, however, for only about three years, for in 1891 he founded the Zeiss-Stiftung. As already mentioned, Abbe was the son of a spinner. He, therefore, had experienced the hardships of long hours and small pay. He had now become the proprietor and manager of a large industrial establishment, but had not forgotten the surroundings of his youth and was able to realize the human side, as well as the financial and scientific sides, of great enterprises. Though absorbed in his work, he had found time to give a good deal of thought to public and social matters. His essays, which were published after his death, fill five good-sized volumes. Among these are observations on various subjects, political and social, and from these writings we are able to learn something of the motives and reasons that guided him in creating the Zeiss-Stiftung. To adequately describe this foundation is, however, not easy. Its statutes alone fill sixty-eight pages of the works of Abbe, and his commentary upon them fifty-eight more. It will, therefore, be seen that it is decidedly complicated, much more so than the Constitution of the United States. All of the details cannot be given, and only the leading features will be set forth. The provisions fall into two general groups, regulating—1, the ownership; 2, the relations with the employees.

The conditions of ownership are so peculiar as to be almost unique. The foundation is neither a partnership nor a joint stock company, nor is it a charitable institution. It is a business corporation, owning and controlling the optical works, but it operates under the final control of the State. This follows to a certain extent from the statement of the purposes, which are enumerated as follows:

A. *Appertaining to the works.*

1. The cultivation of the branches of instrument making which are established in Jena.

2. The permanent provision for the economic security of these enterprises and for the maintenance of the labor organization which is connected with them.

3. The accomplishment of greater social duties than a personal owner could permanently guarantee for the purpose of bettering the personal and economic position of all of those who coöperate in the works.

B. *Outside of the works.*

1. The promotion of the general interests of the mechanical arts involved.
2. Participation in institutions and measures which are in the general interest of the laboring population of Jena and the neighborhood.
3. The promotion of scientific and mechanical studies.

It is clear that these purposes might be carried out by an individual or a joint stock company, but it would be difficult to insure their observation under the conditions involved in the unrestricted control of private owners. The foundation as a legal personality is represented by what is called the Stiftungs-Verwaltung, or governing board. For the management of the business there are in addition the Vorstände, or managing boards, one for each of the works that may exist at any time, and a commissioner, who represents the governing board in the meetings of the managing boards. The rights and duties of the government of the foundation are entrusted to that department of the Grand Ducal government which has charge of the University of Jena, and the permanent commissioner must be a high officer assigned by the minister to this duty. The enterprise is thus under the ultimate control of the government, subject always to the terms of the trust. Each managing board of a business enterprise must consist of a group, which, however, cannot contain more than four members. In the case of the optical works, at least one member of this board must be connected with the management of the glassworks. The members are appointed by the government, after due consideration of the report of the commissioner and of the other members of the board, and no one can be appointed against the unanimous vote of these members. Only those persons can be appointed who are experts, either in science or in business, and at least one member must be an expert scientist in the subjects concerned in the business. This board practically manages the business interests, and when the Zeiss-Stiftung was fully developed and its statutes adopted, which was not until 1896, Abbe simply became one of the three members of the board of the Zeiss-Werk. The statutes provided that they should not be revised for ten years. At the end of that time, in 1906, some minor changes were made, and the description given here will apply to the statutes in their present form. Elaborate

provisions are made under which further amendments may be introduced, but they are not encouraged.

In describing the relations of the employees to the establishment, it is important to emphasize at the outset that Abbe intended to maintain in the fullest sense of the word the freedom of the employees and, therefore, to avoid anything savoring of paternalism, either in the good or bad sense of the term. That is to say, he did not wish to have the business treat its employees like a fairy godmother, nor, on the other hand, to take advantage of their dependence upon it in order to influence either their political or their social ideas. His aim was to make their relations business relations, nothing more. Business, however, does not necessarily mean the crudest form of business. Labor contracts may, as already stated, take any form from the simplest to the most complex, without departing from the business basis. It goes without saying, therefore, that all of the insurance features required by the German insurance law are included in the labor contract, and it is not surprising to find that some of these features were voluntarily anticipated in the works before the Zeiss-Stiftung was created, and before the insurance laws were passed, while others have been elaborated beyond the requirements of the law. Thus compulsory sick insurance was introduced as early as 1875, and after the passing of the imperial law, the fund was converted to conform to that law. In 1888, on the day of the death of Zeiss, a system of old age pensions was introduced. In 1892, a further step was taken in guaranteeing a minimum weekly compensation, provision for overtime, etc., and in the same year the semi-annual medical examination of juvenile workers and apprentices was introduced as a prophylactic measure against sickness. In 1893 a special savings bank for the establishment was introduced. Since the full establishment of the statutes of the Stiftung, the labor contract includes, besides the ordinary insurance features already noted, many other provisions. The very first article of the statutes relating to employees says that they must be appointed without reference to race, confession, or political party. They must also be permitted to exercise their general personal and political rights. To take up some more of the details, the regular working-day is limited to

nine hours; no one is obliged to work overtime or on holidays, excepting in the case of interruptions of the works, and contracts for overtime cannot be made for more than four weeks. All workers over eighteen years of age are entitled to a holiday of twelve working-days, and if any are appointed to honorary offices in the service of the Empire, the State, or the town, the necessary leave of absence must be given for this purpose. Provision is also made for committees to represent the workers.

All must be appointed for a time wage, which is fixed in advance, per week or per month, and is to be paid for the holidays which fall on week days, but otherwise they are to be paid only according to the time which is spent. This pay cannot be lowered in the case of a temporary or permanent shortening of the working-day, unless the man in question is unable to continue his former activity, or for reasons which lie in himself passes over to another position. In the case of piece work, the fixed time wage counts as a minimum income, and pay is continued during the regular yearly vacation.

Important incidents of the labor contract are, of course, the insurance features. The sick fund cannot give the members less than full allowance for a half year (since extended to a year), three-fourths of the average wages as a sick allowance, insurance of the nearest family members, free choice of the physicians among the certified physicians of the dwelling place, and obligatory contribution on the part of the management equal to the contributions of the insured. Employees who have entered the service before their fortieth year and have worked for five years have a legal claim for a pension, if they become unable to work or otherwise to continue their activity, except for gross faults on their part, while those dependent upon them also receive an allowance. In general, the pension amounts to fifty per cent. of the nominal wage for those who have worked between five and fifteen years, and it increases by one per cent. up to the fortieth year. The total may thus become seventy-five per cent. of the wage. Nothing is said about insurance against accidents, as this is regulated under the general laws and is a charge upon the business. One of the most peculiar and significant features of the labor contract is the provision for an indemnification upon

dissolution of the relation. Two weeks notice must be given on either side, for ordinary workers, and six weeks for those in the business office. In addition to this, those who have been in the service for three years, after the completion of their eighteenth year, have a claim for indemnity, if they are dismissed without being incompetent to continue their work, or guilty of some fault which has led to their dismissal. This indemnity takes the form of the continuation of their previous wages for the six months following their dismissal, and for those who have a claim to a pension, the indemnity cannot be less than the amount of their invalidity pension for a period equal to a quarter of the time of service on which it would be reckoned. Thus the longer a person has been in the service, the larger his indemnity. His dismissal for some serious fault, such as drunkenness, dishonesty, etc., causes the forfeiture of this right. The reason for this peculiar provision is not so much to give the men a present as to bring a pressure to bear upon the manager not to cut down the number of hands unnecessarily in a period of business depression, which in turn, of course, implies not increasing them unduly in case the business becomes suddenly active. The aim is to maintain a certain steadiness in the number of employees and thus avoid violent fluctuations.

Not less important than the provisions regarding the employees are those which relate to the profits. Special clauses define the statistical methods which are to be applied. These may be roughly condensed as follows: The yearly expenditure is the sum of all expenses and obligations which are due within the fiscal year, including the payments for pensions, etc., which are to be treated as part of the cost of production. The business gain or deficit is the difference between the expenditure as just defined and the total income; the net profit of each establishment is obtained by taking into account a proper amount for depreciation and interest on the capital, which shall include, besides the regular rate of interest on mortgages, a premium for risk corresponding to the average loss of capital in similar industries. This, however, is not the amount available for dividends. In order to secure the permanency of the works, a certain sum is set aside for a reserve fund, which includes among other things a sum

necessary to secure the various demands for pensions, indemnities, etc., a sum for extending the business and a sum to make good a possible loss. When it has reached an amount sufficient to meet these requirements, a constantly diminishing sum is to be added to it. After all of these demands are met, the Stiftung is, according to circumstances, to set aside one-half or three-quarters of what remains for the purposes expressed in section B, namely, the general interests of the industry or of science. The final disposition of the reserve fund rests with the Stiftung-Verwaltung, or administration. Special provision is, however, made for sharing the profits with the employees. The percentage which is thus to be added to wages and salaries from the profits is to be determined from year to year in such a way that, taking account of the fluctuations in the activity of business, a proper relation shall exist between the share of the employees and the share of the foundation, according to the specified provision made for this purpose. These are defined in a general way by the statement that the aim is not so much to increase the net profits as the total output, and that the Stiftung shall retain that part of the profits which has been earned, not by the laborers as individuals, but rather by the organization as a whole and as a going concern.

A word should be said regarding this so-called profit sharing. Abbe himself once delivered an address on the subject, in which he took up the various arguments commonly urged in favor of profit sharing and rejected them all. One point that he especially emphasized was that the system was liable to be illusory, because there was always great danger that the nominal wages paid would be reduced by the amount paid as a share in the profits, so that the total wages would be no more than before. He put no faith in the power of profit-sharing devices to conciliate the differences between the employer and employed.[4] Nevertheless, he introduced a system of profit sharing in his foundation on other grounds. The share in the profits was not intended to give the worker in good years more than he would ordinarily receive. Nevertheless, it was important, because it made it possible to establish nominal wages which in bad years would secure the

[4] Abhandlungen, vol. 3, p. 109.

laborer against having his earnings pushed below a certain level. He illustrates his point by a simile. In the industrial organization of the optical works, he states, there are two beams upon which the important interests of the working forces are supported. One is a strict wage system by which the manager is pledged to certain minimum rates even in bad years. The other is the financial strength of the enterprise on which the execution of this wage system depends. In order that these two beams may be held together they are supported by a special bolt, that is, the profit which in good years makes the income of the workers depend upon the fluctuations of business. On this bolt there is a pretty rosette; namely, the pleasure which the individual gets from sharing in the profits. The significant thing, however, is not the rosette but the bolt. In point of fact the enterprise has yielded profits enough to be divided every year but one, but the amount has varied considerably, ranging, except in the year 1902-03, when nothing was divided, from five per cent. to ten per cent.[5]

The nominal working-day, as already stated, was limited by the statutes to nine hours. In point of fact, they have had an eight-hour working-day since 1900, and the manner in which this change was brought about is so characteristic that a word or two should be said about it. At the beginning of 1900 the question was put to the employees: "Who is willing to try to produce as much in eight hours as hitherto in nine hours?" About six-sevenths of the employees voted for the experiment, and the eight-hour day was introduced provisionally for a year. The result was very satisfactory. It could not be measured exactly, excepting in the case of the piece workers, but it turned out that here the output was not only not less, but that it had increased by about four per cent. When the matter was looked into more carefully and the workmen questioned, they said that in the beginning they worked very hard in order to keep up their production and their pay, but that they found this too exacting; then they dropped into the old pace and wanted a return to the nine-hour day. The figures showed, however, that they had not gone back to the old pace. They had given up the killing

[5] Schomerus, Arbeits-Verhältniss, p. 13.

pace, but had returned to one which was still higher than the old one and yielded a slightly larger output. Abbe explained the matter in a very simple way. He established an equation of human exertion, according to which the daily expenditure of energy must be equal to the daily replacement; this expenditure depends upon three elements: 1, the production; 2, the speed; 3, the fatigue during the intervals of labor, the seconds or minutes lost in driblets, while standing or waiting in the noise and the bad air of the factory. These driblets are worth nothing for relaxation, but if they can be cut short and the time lumped, they are valuable. The point is to gradually shorten the time of labor, until the gains coming from a longer period of relaxation and a smaller waste of time are still greater than the loss due to increased speed. The limit represents the *optimum.* This will, of course, differ according to the occupations and the intelligence of the people. The case could not be proved so exactly for the time workers, but it was thought that here, too, there was no loss of output. The consequence is that since April, 1901, the eight-hour day has been the rule. The hours vary according to the season. In summer they are from 7 to 11.30 and 1.30 to 5; in winter, from 7.30 to 12 and 2 to 5.30. Pauses for luncheon, morning and afternoon, are, however, now abolished and the prohibition of drinking during the working hours has, doubtless, something to do with the favorable results of the shorter day.

Some incidental features should still be mentioned. A good deal has been done for the general education and benefit of the people, especially in the maintenance of the *Volkshaus,* with a fine library, reading-room, etc. Baths, too, have been introduced. The factory has even gone into the business of manufacturing temperance drinks to sell to the employees, and of selling milk to them on a large scale. Money is loaned, to help people build houses, at a moderate rate of interest. But there are no company houses. There are schools for instruction in trades, etc. The question of patents is distinctly dealt with in the statutes and it is provided that such inventions, improvements, etc., as are useful for the promotion of science, shall not be protected by patents or similar measures. In point of fact, how-

ever, the concern has been obliged to take out patents in self-protection, and they are regarded as a necessary evil.[6]

Not only the workmen in the ordinary sense of the word, but also the officials of the company have to be provided for. It goes without saying that the higher officials receive higher compensation, on account of the greater responsibility put upon them, but in order that they may not be tempted to unduly raise their own salaries, it is provided that the highest compensation shall not be greater than ten times the average yearly income of all persons over twenty-four years of age who have been in the works at least three years, according to the average of the last three business years. Moreover, the members of the board of managers do not share in the profits.

In the beginning mention was made of the inclusion of certain public purposes in the Zeiss Foundation. These have been realized mainly by gifts to the university. Indeed, the effect of the works has been, not only to add very considerably to the population and prosperity of the town, but also to rejuvenate the university to an amazing degree. Thirty years ago the University of Jena, although old, was small and badly equipped. The profits of the Zeiss works have not only been used to add certain regular funds, but also to make extraordinary improvements. Among these are new buildings for the physical, hygienic and mineralogical institutions, the creation of an institute for scientific microscopy, an extension of the chemical institute, and the addition of a seismographic institute to the astronomical observatory. Otto Schott has also given large sums, especially for technical physics and technical chemistry, out of his private means. Finally, the entire scale of professorial salaries has been reformed and raised.[7]

One naturally asks, what are the results of this elaborate arrangement? It is clear that the time is not ripe for any final judgment. Only about twelve years have elapsed since the foundation came into complete working order. It has not been subject to the test of hard times, or of a change in the spirit of its

[6] Auerbach, p. 146.
[7] Auerbach, pp. 148-155.

management. The personal respect for the founders doubtless still counts as a factor in preventing friction. Moreover, it must be remembered that this particular form of manufacturing is exceptional. It deals with mechanics of a high grade, intelligent and highly paid, therefore relatively stable. It turns out a product which contains high value in small bulk and is, therefore, relatively independent of questions of transportation and local conditions. It would be altogether rash to assume that its success in Jena would necessarily make it a model for manufacturing establishments in general. The enterprise as a whole is, of course, eminently successful. Its product is of the highest grade, the men are well paid, the average wage being about 1,900 marks a year,[8] and the relations are on the whole peaceful. They have never had a strike, though such a disturbance was once threatened. Dr. Schomerus is especially appointed to look after the relations with the men, and his tact and skill are doubtless of great importance. He stated that the fact that the management were so easily approachable led to a considerable number of small explosions which prevented discontent from gathering to create a large one. Many details in the scheme are even now criticised. Some authorities think that the limitation of the salaries of the head men keeps them altogether too low. It is clear that if the average wages are 1,900 marks, the maximum for the managers must be about 19,000 marks, or less than $5,000. If one may judge from the results, the system is hard on the brain workers. Both Abbe and his successor, Czapski, died comparatively young, the former at sixty-five, the latter at forty-six, and apparently overwork was not without its influence in shortening their lives. Though the conditions of employment would seem to be ideal, the hours being short, the wages high, the buildings clean and well equipped, the insurance features liberal, there are yet a good many socialists among the workers. We are told that out of about two thousand employees, some two hundred would be classed as office men and of the remaining eighteen hundred about eight hundred belong to the socialist unions, or *Gewerkschaften,* about one hundred and fifty to the liberal *Gewerkvereine.* This is, of course, not necessarily a sign

[8] Auerbach, p. 123.

of discontent with the conditions of employment. When a business is increasing so rapidly, it must draw a considerable part of its workers from other places and they naturally do not give up the political affiliations which they have perhaps cherished for years. On the other hand, the fact that they belong to a party which is in its faith, if not in its works, revolutionary, also indicates that they do not believe that they have found an economic paradise, even in Jena. It would not be strange, perhaps, if all of the two thousand employees did not fully share the ideal aims of the founder, even though they are perfectly willing to share in the profits which his genius has made possible, and it is said that they sometimes begrudge the large sums given to the university.

The interest and significance of the Zeiss-Stiftung to the writer lie more in the motives and ideas which it embodies than in its details. Many of the results accomplished by the Zeiss-Stiftung are accomplished by great enterprises in other parts of the world under a different form. When, e. g., Mr. Carnegie gives ten millions of steel bonds to found an institution for scientific research, he is putting the United States Steel Corporation under the obligation of contributing a certain part of its earnings toward this purpose, very much as the managers of the Zeiss-Stiftung set apart some of the earnings of the works in order to promote scientific study in the University of Jena. Likewise when the steel corporation and other companies set aside some of their stock to be acquired by employees, they give these holders not only a share in the profits of the business, but also an interest in preserving the permanent strength of the whole enterprise, as distinguished from the temporary advantage of one class of workers. The steel corporation, however, was founded to make money for its stockholders and bondholders. It is merely through an act of generosity on the part of individual owners of securities that it may be made to contribute toward scientific research or other public objects, whereas the social relations of capital are recognized in the very business constitution of the Zeiss-Stiftung.

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NOTES.

The Social Programme of the Metropolitan Life Insurance Company. At the annual convention of the superintendents of the Metropolitan Life Insurance Company held in December last, Mr. Haley Fiske, the vice president, outlined the future policy of the company as follows:

"The problem for us is to so work our operations that we shall adapt ourselves to the public expectation and to the public necessity. We are here and must meet the issue. We must get into the current of the world's thought. It is not our place to oppose it. There is nothing on earth to do with our money except to hold that part of it which safety requires us to hold for the protection of our policy-holders, and get the rest back as quickly as possible into the hands of those who contributed it. You may be prepared for action on the part of your officers along all lines which seem wise, to get into confluence with public thought, public expectation, and public desire. If there are any methods by which expenses can be cut down, we are going to find them out and pursue them, and you may expect reforms in the prosecution of this business which may cut at the very vitals of the system. One thing the management is determined upon: nobody shall sell insurance cheaper than we can sell it."

At the meeting of the Board of Directors of the company in January, Dr. Lee K. Frankel of the Russell Sage Foundation was elected manager of the Industrial Department. Dr. Frankel was formerly manager of the United Hebrew Charities of the City of New York. His work brought him into close and constant contact with the industrial classes. The conviction was brought home to him that very much of existing dependency is due to causes over which the individual has no control, and that if he could be protected through insurance against the ordinary risks of industrial life, much of poverty and dependence could be obviated. In this belief, Dr. Frankel resigned his position with the Charities in March last, to make a study of workingmen's insurance for the Russell Sage Foundation. To this end he has spent considerable time in Europe, investigating the systems of insurance in use there. The results of this study will probably be published by the Foundation in the near future.

Dr. Frankel's relations and large acquaintance with the groups of social workers throughout the United States will enable him to interest them in the proposed changes, and to coöperate with them in making the value of insurance more generally known and appreciated. For the present the company will limit its activities to writing life insurance as heretofore. It is hoped, however, if the demand therefor is shown, and if the feasibility can be demonstrated, to provide other forms of insurance, particularly insurance against sickness, invalidity and old age. Primarily, however, it is the earnest purpose of the company, irrespective of the kind of insurance which it may develop, to furnish it to workmen at the minimum cost consistent with security and safety.

The timeliness of this action on the part of the company is indicated by the resolution of the Conference on Child Care, called by ex-President Roosevelt. The Conference unanimously resolved that it was the sense of the Conference to provide effective measures to secure compensation or insurance, so as to provide a family income in case of sickness, accident, death, or invalidism of the breadwinner. In the opinion of those assembled, the most important and valuable philanthropic work was not the curative but the preventive—to check dependency by a thorough study of its causes and by effectively remedying or eradicating them.

Insurance, not merely as a business proposition, but as a social programme, will be the future policy of the company. If prevention of tuberculosis and reduction of the death rate will give cheaper insurance, the company hopes to coöperate with existing agencies for the eradication of this and other diseases, and to place at their disposal its machinery and the statistical material which it has gathered since its organization. Its field staff and agency force will be instructed to establish cordial relations with charitable and social agencies, since these agents, coming into daily and intimate contact with the family, are frequently in a better position to know its needs and difficulties, and hence have valuable and enlightening information for the use of social workers and for all interested in social improvement.

Since the opening of the new department, the company has carried on an extensive advertising campaign in the columns of *Charities and The Commons,* calling the attention of social workers throughout the United States to the establishment of the above-mentioned Bureau of Coöperation and Information and placing the

services of the Bureau at the disposal of health officers, settlement workers, charity organization societies, labor organizations, committees for the prevention of tuberculosis, educational bodies and similar agencies for the improvement of social conditions. There has been a very lively response to this advertisement and as a result of correspondence arising therefrom, the agents of the company have distributed thousands of pamphlets for various State agencies and for societies engaged in the eradication of tuberculosis. The company has at present under consideration the publication of a pamphlet of its own on the prevention and treatment of tuberculosis, which it will distribute among its policy-holders throughout the United States.

If the consent of the superintendent of insurance can be obtained, it is the intention of the company at a very early date to erect a sanatorium for the treatment of its tuberculous office staff and in particular for the treatment of tuberculous policy-holders. This is in line with the recommendations made by Professor Fisher, that it is good policy for a life insurance company to engage in the prolongation of human life. The company hopes gradually to extend this form of activity along other lines and to do everything within its power and within its privileges under the laws to bring home to its millions of policy-holders the need for proper hygiene, sanitation and wholesome living.

Railway Land in Manchuria. Through the courtesy of the South Manchuria Railway Company, the following information regarding the extent of railway land in Manchuria has been obtained. It is hoped that the publication of this data will make the matter of the "railway zone" in Manchuria and the many important problems connected therewith at least more intelligible than they have been hitherto.[1]

From the carefully detailed tables of figures especially prepared and placed at my disposal by the Company, I have been enabled to make the following computations:—

The entire land belonging to the Eastern Chinese Railway, over which Russia exercises administrative powers, covers an area of 328,720 acres, or 513.63 square miles. Around Harbin alone, the "zone" extends over 12,000 dessiatines, which is equal to 32,397 acres, or 50.62 square miles.

[1] Cf. *Japan in Manchuria,* YALE REVIEW, XVII, 185, 268, August and November, 1908.

If one adds 20 square miles to this last area, the sum will be equivalent to the total extent of the land belonging to the South Manchuria Railway, which is at present under Japan's control. The exact area is 70.54 square miles, or 45,156 acres. Of this, about 7.5 per cent., or 5.36 square miles (3,429 acres), have been acquired by Japan from Chinese land-owners during and after the recent war with Russia, the rest—about 65 square miles—having been handed over by Russia in accordance with the Treaty of Portsmouth.

The following table will show the distribution of the land along the railway in Russian control:—

In Heilung Province, depots	124,970 acres		
" " other lands	71,328 "		
" " along the rail	9,983 "		
	206,281 "	= 322.31	square miles
In Kirin Province, depots	84,967 "		
" " along the rail	5,075 "		
	90.042 "	= 140.70	"
At Harbin, 12,000 dessiatines	32,397 "	= 50.62	"
Total	328,720 acres	= 513.63	square miles

Of the 79.54 square miles of the land of the South Manchuria Railway, the "zone" is distributed around the more important stations as follows, the areas about An-tung and Chang-chun being among the sites acquired during and after the Russian war:—

At Dairen (Dalny)	570 acres, or	.89	square miles
At Port Arthur	43 "	.07	"
At Ta-shi-chiao	773 "	1.21	"
At Liao-yang	1,503 "	2.35	"
At Mukden	1,490 "	2.33	"
At Tie-ling	1,372 "	2.17	"
At Chang-tu	851 "	1.33	"
At Kung-chu-ling	1,630 "	2.55	"
At Chang-chun	1,228 "	1.92	"
At An-tung	1,243 "	1.94	"

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BOOK REVIEWS.

Principios de Sociología. Introducción. Por Adolfo Posada. Madrid: 1908—pp. viii, 486.

Besides the above work, Señor Posada, who is one of the foremost Spanish authors in the field of the social sciences, has recently written a ninety-seven page *Estudio Preliminar* to the Spanish edition of Seligman's *Economic Interpretation of History*. Here he has dealt, in his own words, with "the weighty problem of philosophy of history or sociology called up by the materialistic or economic conception of history."[1] This essay, with the book under review, may be taken as defining an attitude toward the subject of sociology; and it is this attitude, rather than any questions of detail, which will constitute the chief topic of this review.

The *Introducción* (presumably to a major treatise) is of a type perfectly familiar in sociology of the present day: it is a book of argumentation and comparison of opinions as to what sociology is, what field it occupies, what position among the sciences it holds, and so on. As a representative of that type of treatise there is not much fault to be found with it; the author has gotten together the views of a great many writers, which he presents largely through excerpts, and has expressed himself with some acumen at various stages of his progress through his collection. His affinities are mainly American, the bulk of attention and "discipleship" falling, it would seem, to Ward and Small. Decided preference is shown for the "intensive" and "explicative" writers as against the "descriptive" and "exteriorist." In a word, the book deals with concepts of secondary intension. It is as if the author were playing with the tags of things, not dealing with the things themselves.

The present writer must own up at once to a thoroughgoing indifference to works of this type, and to a steady conviction that, at least upon the present stage of the science, they represent misspent energy. Argumentation and dialectics designed to prove that there is such a thing as sociology; expansive talk of the "social process" and kindred largely metaphysical ideas; the balancing of these gen-

[1] *Estudio*, p. 71. Seligman's *La Interpretación económica de la Historia* was formally mentioned in the preceding number of this REVIEW.

eral concepts, together with a more or less tenuous refinement upon them; the attempt to assign sociology to an exalted place in the "hierarchy of sciences"; soliloquy over methodology—all these things appear to be little more than dire futility in the development of a confessedly new and assuredly challenged discipline. Such a method of treatment is not calculated to secure for sociology the scientific standing which its votaries assert to be its due; and yet it is the sociological writer of this type who is commonly most impatient to secure early or present recognition for the science.

On the other hand, it is in the bosoms of those who have contributed most solidly to the recognition of a science of society that the minimum of unrest and distress as to names, recognition, delimitations and the like has been found to exist. They were too busy securing tangible results to engage in verbal turmoil; in any case they knew that the things that cannot be gotten around are not arguments but facts. The character of a science—its recognition as a reputable and useful member of its "community"—is, in a sense, like that of the individual; it is, as President Woodrow Wilson so well said of personal character, essentially a by-product. No man ever gained true reputation by voluminous assertions of his rectitude or public analysis of his motives; and sociology is never going to gain recognition except through such demonstration of efficiency as has been made in but few cases in the history of the science. Working-over and rearranging the conclusions of earlier masters is not calculated to advance the science very far; and it is indeed ominous when the terms "descriptive" and "exteriorist" are applied in a somewhat patronizing way to the real founder of the science.

Let us consider the case of Spencer for a moment. Few would deny that he set what he called sociology upon its feet and secured for it considerable recognition among the scientists of a great scientific epoch. Those who are disposed to flout what now goes under the name of sociology do not usually extend their mordant expressions to include Spencer's work. While few or none make any constant or actual use of his cumbersome evolutionary formula, many have—often unwittingly or unwillingly—accepted as a part of their intellectual outfit the truly cumulative series of conclusions which stretch through section after section of his Sociology. For he has assembled data that cannot be ignored and has drawn primary inductions that admit of the most constant and concrete verification. By way of enforcing this point it may be further

contended that Spencer's Sociology is likely to outlive anything else he did for the very reason that it was in the Sociology alone that he was forced into direct and enduring contact with his materials. In the absence of systematized data and other men's discussions he was obliged to collect his own materials, classify and digest them, and construct his own primary interpretations. This necessity it was which, in great measure, held Spencer down from the ethereal flights of his cosmic formula and obliged him to turn his unrivalled analytic powers to simpler and more direct relations. By nature he did not take to this sort of thing, and he groaned in spirit over the necessity imposed upon him; but it is lucky for the science that he could not throw off so freely in this field those brilliant generalizations of which Darwin used to say that they made him impatient with himself because he could not somehow accept them. Biologists and psychologists do not seem to have erected shrines to Spencer in their pantheons; but for sociologists he is still *praesidium et dulce decus* in the next generation.

If the sociologists since Spencer's time had occupied themselves solely in developing and refining upon his philosophy—as the biologists for thirty or forty years devoted themselves to refining upon the ideas of Darwin, and, indeed, as rudimentary scientists of all kinds for hundreds of years confined themselves to reinterpretations of Aristotle—it would be a regrettable matter. But they have not done this to any very great extent. The Darwin cult accomplished at least this important end, that Darwinian method (e.g., the ideal scientific method) became unconsciously ingrained in the devotees; but in the case of Spencer the tendency has been to imitate the less solid and mere characteristic aspect of his work, and to run off after this and that "interpretation"—which, like the "economic interpretation," may too often represent the attempt, impossible in life and utterly unscientific, to explain the complex whole from the standpoint of a single factor. It is a pity that the founder of sociology could not have shed over the forward stretches of the science such an atmosphere of undeviating and patient devotion to concrete exactitude that ambitious projects, bright ideas and theoretical disputation should have remained at a constant discount.

The more so since the subject-matter of sociology, as now understood, lends itself so readily to easy and often cheap generalization. The material of sociology is taken too often to be a matter of common knowledge, so that many a one fancies himself competent to

draw conclusions as to the life of society and its laws because he is himself a member of society. Thus is rigorous investigation minimized. Again, especially if society be viewed in its modern complexity, the fact that what is studied is a function, in large part, of the play of human thought—and so, apparently, willful and capricious—contributes to the inherent precariousness of the subject and calls for the more strictly scientific treatment. The complexity of modern society seems to lend itself to all theories or to none. And so it was an even greater pity that Spencer could not have impressed it upon his followers that the involved and multiplex was not that with which to begin. It has even resulted that the name of the science has come to cover the most diverse of studies and activities that have to do with contemporary society. A representative of a railroad engineers' union can be mirthfully appointed to a commission as a "sociologist"; and women that rant of man's tyranny in public are hailed as fellows in the science. Oratory and the methods of the stump on the part of the speaker; partisan applause in the audience; agitation and recrimination—these are social phenomena, but they are not science, and they do not assist sociology to its recognition along with geology, biology and the rest.

Posada has little to say of this "practical sociology"; but the common divagation from Spencer in the direction of fruitless dialectic leads one to the mention of divergence in another direction. Rarefaction in one direction—the sweat and turmoil of the garish *Tummelplatz* of contemporary passion and strife in the other: neither atmosphere adapted to the life of science. "Descriptive" sounds pleasantly palpable and "exteriorist" strangely restful in the presence of these two extremes. If sociology can thrive on speculation, or on methodology, or almost solely in the medium of actual life, it is the first science that has ever done so; and it cannot be said to have justified itself much along this line of procedure. Spencer knew perfectly well what he was about when he based sociology on the data of ethnography and history; every real science has to have some body of data enough detached from the present or from the emotions of men to be virtually objective. The social sciences deal with material that is hard to view without emotion or even to observe with precision, in the living present; nobody wants to minimize their application to problems in hand, but that their principles should be derived from the cases to which it is proposed to apply them is going a little too far for the inherent weaknesses of the human mind. Further, and finally, the heading of

the science of society away from contemporary application toward a body of data in ethnography and history would tend to encourage the development of the true scientific spirit as opposed to the neurotic hankering after recognition that cannot await the outcome of a long process of silent investigation. It would tend to eliminate those with other than scientific aims. Sociology needs to live laborious days; it needs its "hodmen"; it can largely dispense with makers of systems, conceivers of concepts and dreamers of dreams. It needs another and yet another *Descriptive Sociology,* and *Primitive Culture,* and *Kulturgeschichte,* and *Folkways;* it does not require agitation and sensation. In a word, sociology has not yet behind it the body of positive observations that warrant its entrance into the field of theory-balancing on the grand scale. Effective occupation is the only title to a sphere of intellectual influence, and neither forensic shoutings nor metaphysical cloud-spinning are of any avail if the preparatory labors are not in evidence. And the only effective occupation of a field which might be called that of a science of society—an occupation conferring a prescriptive right to the title "sociology"—was the result of labors and inductions that have few counterparts in the literature discussed most appreciatively by the author now before us.

In matter of form the volume under review leaves a good deal to be desired. Misspellings of names and book-titles are very common; and some usages (e. g., "mister") are ridiculous. Not a few crude mutilations on the analogy of *Sumplowiez* (for *Gumplowicz*) occur. This style is probably as clear and simple as the type of treatment allows.

A. G. K.

Report of the New York State Public Service Commission, First District, for the six months ending December 31, 1907. 2 volumes. Albany: J. B. Lyon Company, State Printers, 1908—pp. 793; 737. Senate Document No. 20 for the year 1908.

The ready response which Mr. Roosevelt's appeals have obtained during the past four years has made it evident that the people of this country believe that corporate management needs governmental supervision.

This feeling has found expression in the State of New York in the Public Commissions Act of 1907. This act provided for the appointment of two commissions. The commission for the first district has jurisdiction over certain public service corporations

located in the City of New York. The commission for the second district has jurisdiction over the rest of the State.

The report of the commission for the first district for the six months ending December 31, 1907, has reached us and is of more than passing interest, because of the highly important matters dealt with by this commission and discussed in the report, and also because the success or failure of this important attempt to meet the demands of the people is charged with very great consequences, not only for the large State of New York but for the whole country. If this method of control shall prove successful it will doubtless be followed in other States, and in any case the stockholders of the public service corporations within the jurisdiction of the New York Public Service Commissions are to be found all over the country, and indeed all over the world.

This commission has had devolved upon it the duties of former commissions within the metropolitan district, such as the Railroad Commission, the Commission of Gas and Electricity, the State Inspector of Gas Meters and the Board of Rapid Transit Commissioners for the City of New York. As the successor of these Boards, it has important duties to perform, the scope of which is pretty well understood, but in addition to these duties, it has greatly extended functions of control and supervision of public service corporations.

A large part of this report is taken up with a discussion of the rapid transit situation in New York, a problem which was before confided to the Rapid Transit Commission. In attempting to provide additional rapid transit facilities the commission asks that a constitutional amendment be passed, exempting from the ten per cent. debt limit bonds for the construction of rapid transit lines in so far and so long as such rapid transit lines shall be self-supporting. It also advocates certain amendments to the rapid transit law designed to give the commission greater latitude in contracting for the use of private capital in the construction of rapid transit routes. The anxiety of the public to prevent private capital obtaining too favorable bargains, and its distrust of its officials, has resulted in narrowing the commission's powers to limits within which it has been unable to offer terms sufficiently attractive to private capital to induce it to finance new subway routes.

It would require more space than is here available to discuss the tremendous question of increasing the debt limit of a city like New York, which already has a net debt of $537,000,000, or indeed to

explain the limitations which the legislature has imposed under the so-called Elsberg amendments to the Rapid Transit Act.

Some idea of the magnitude of the questions relating to transit facilities which the commission is called upon to deal with may be obtained from the statistics set forth in this report. To mention only a few. Various subway routes have been proposed which, if built, would cost quite half a billion dollars. The tunnels to Brooklyn connecting with the Manhattan subway were nearly finished at the date of this report and have now been in successful operation for more than a year. Work was actually begun on the Brooklyn Loop. The Fourth Avenue subway in Brooklyn was determined upon, but it has since been reconsidered. Private capital was and still is engaged in constructing the Pennsylvania tunnels from New Jersey across Manhattan Island to Long Island and the so-called McAdoo tunnels to New Jersey. The assets of street, surface, elevated and subway railroads under the jurisdiction of the commission amount to more than $624,000,000; the gross earnings from operation to more than $66,000,000; the number of passengers carried during the year to upward of 1,323,000,000—more than 80 per cent. of the entire number of passengers carried by all the railroads of the State, and 66 per cent. more than the number of passengers carried upon all the steam railroads in the United States. Of the 3,560,000 persons transported daily, it is estimated that 60 per cent., or something more than 2,000,000, travel within the limits of four hours, from 7.30 to 9.30 in the morning, and 5 to 7 at night; that is to say, 500,000 passengers are transported an hour during these hours—more than 10 per cent. of the entire population of the city. On October 17, 1907, more than 425,000 persons crossed the Brooklyn Bridge, and during the heaviest hour of travel more than 54,000 persons crossed the bridge in one direction.

As everybody knows, the facilities for taking care of this great number of passengers are scandalously insufficient.

During the first six months of the commission's existence the transportation companies and gas and electric companies reported to it more than 24,200 accidents. The total number of deaths occurring in connection with these companies was 288.

In the first district there are twenty-eight gas and electric light companies with more than 1,100,000 consumers. These companies are capitalized at more than $350,000,000 and the gross earnings are more than $48,000,000 a year. Of the 127,000 meters tested only 1.2 per cent. were tested because of complaints and of these

last only 598 were fast 2 per cent. or more, the average per cent. of error of all fast meters being 3.43.

In the present state of the public mind towards public service corporations, it is not surprising that the applications made to the commission for the right to construct extensions or for new enterprises have not been very numerous, and as the panic took place in the midst of the six months covered by the report it is not surprising that the applications to issue new securities have been few and unimportant.

Not the least interesting portion of the report deals with the commission's efforts to require the transportation corporations to increase their facilities. As the people of New York necessarily are compelled during the so-called "rush hours" to ride packed like sardines in a box, the companies have not hesitated to reduce their services during the rest of the day so that all the traveling public may be treated alike. Thousands of additional cars have been required to be added by the orders of the commission.

Any one who has seen how effective the side doors of the cars of the Paris subway are to enable passengers to alight from and board trains, must wonder why the New York subway should have failed to adopt this device of its own motion. However the commission is accelerating it in placing greater exit facilities on its cars.

The establishment of a uniform accounting system, which shall include a depreciation account and suspense accounts for discount on bonds, is all in the interest of investors.

No one can read this report without being impressed with the great need of having some administrative body representing the people to stand between the public service corporations and the legislature; and this both in the interest of the public and in the interest of the corporations themselves.

The grievances of the people against public service corporations are many. They have corrupted and dominated the organization of both the leading political parties and have been a corrupting influence about legislative bodies. They have treated the investors in their securities often with great unfairness and at times with downright dishonesty. They have often withheld from the public facilities and conveniences which could easily and inexpensively have been given and have at times charged excessive rates. On the other hand, the complaints of corporations against the public have been by no means without a just basis. Legislative bodies, particularly municipal bodies, have refused reasonable and proper requests

for enabling legislation, strike bills have been introduced and countenanced which, if passed, would cause unnecessary expense and embarrassment, and from time to time unreasonable restrictions and regulations have been imposed. Furthermore, taxes are often imposed upon public service corporations which require them to pay far more than their reasonable share of the public expenditures.

Control of public service corporations by the direct action of the legislature, with the responsibility distributed among so many individuals and subject as it is to the influence of temporary political motives, not to speak of corrupt motives, has proved a failure. In the absence of effective control, public opinion becomes more and more exasperated and ready to be led by demagogues and cranks, and in self-defense the corporations are pushed to exercise more and more a corrupting influence on public officials. Sooner or later the situation develops to a point where some drastic remedy is applied which is as apt to result in injury as in benefit to the public, for no political campaign can be carried on effectively without unfairness and without doing something less than justice to the interests attacked. If the public is against a corporation it is likely to be made to suffer by taxation and legislative restrictions and regulations. Fortunately for those corporations which in the past have incurred popular hatred, the people have proved as ready to forget their enemies as to forget their friends, and it has been rare where a community has been able to remain interested for a sufficiently long time to put a public service company permanently out of business after it has become well started. But grievances grow in intensity as they accumulate and if the interests of the investors in the securities of public service corporations, constituting as they do so much of the wealth of this country, are to be safeguarded, it is highly desirable that the public control of their operations should be placed in the hands of responsible officials and removed as far as possible from becoming the subject of party strife.

There are pessimists who say a public service commission such as has been created in New York must, within a comparatively few years, become either hopelessly inefficient or hopelessly corrupt. That, of course, remains to be seen. If it is so, the commission is not likely to become more inefficient or more corrupt than legislative bodies have proved to be when dealing with these subjects. It is certainly less likely to enact regulations which shall prove to be confiscatory and unconstitutional.

HENRY DE FOREST BALDWIN.

Philanthropy and the State, or Social Politics. By B. Kirkman Gray. Edited by Eleanor Kirkman Gray and B. L. Hutchins. London: P. S. King & Son, 1908—pp. x, 339. Price 7s. 6d. net.

The present book was to have formed part of a larger work, a portion of which was but outlined when death overtook the author. In fact, the final revision was never given by him to any portion of the manuscript. One chapter of Part I and five chapters of Part II were never written, while Parts III and IV are entirely lacking. The portion which remains is largely critical and historical. It appears from the outline of the entire work that the concluding chapters would have been devoted to a proposal for the adequate relief of the unfortunate classes in England, and thus have given to the book a sense of completeness at present lacking.

The fundamental thesis of the book is that "private philanthropy cannot provide a remedy for widespread want which results from broad and general social causes; that it ought not to be expected to do so; that the provision of such remedies is the proper responsibility of the State and should be accepted as such."

The first third of the book is devoted to the change in the attitude towards poor relief which has passed over England during the last seventy years of the nineteenth century. The passage of the Poor Law Amendment Act in 1834 marks the culmination of one period of discontent. From this time the conviction grows stronger that the field which remains for private philanthropy is too large to be satisfactorily filled without the assistance of the government. The help first to be asked was financial, but if the State was to provide part of the funds it demanded the right to appoint inspectors who should see there was no mismanagement. Thus the control of one class of work after another passed over to the State, not because the philanthropists lacked devotion, but because the magnitude of the tasks compelled them to ask for help. In no case did the State court this change. It accepted it as inevitable, but was slow to acknowledge the principle on which it rested: that society must provide for those and the children of those who have given the best years of their lives to the service of society.

This intervention on the part of the State did not come at once nor did it follow any single type. The remainder of the volume is devoted to a consideration of the different types of State activity: 1. Annexation—The State assumes the duties which have been pre-

viously borne by individuals. The lunatic asylums and elementary education are cases in point. 2. Partition—Some of the field is still left to private enterprise, while part of it is taken over by the State. There are many instances of this in connection with the relief of the sick. 3. Coöperation—The State takes general charge of the whole field, but is glad to receive assistance from voluntary associations. The government has recently assumed charge over prisoners while in prison, but it gladly receives the assistance of the Prisoners' Aid Associations, voluntary visitors, etc. 4. Supervision—The State directs the voluntary work, sets the task, and defines the conditions, while the individuals are left with a considerable amount of freedom. Thus in the case of the reformatories the executive body is composed of private individuals who act under the supervision of a public official. 5. Coördination—Here the State covers part of a field, while another part is left to private organizations. There are three kinds of inebriate homes, each intended for a particular class of persons. The management of one is private and of two public, but all are considered necessary to the general plan. 6. Delegation—The State delegates to individuals the performance of certain functions. The Society for the Prevention of Cruelty to Children acts under a royal charter in the performance of a public duty.

Mr. Gray argued for State interference in some cases which will appear radical to most social workers. If some trades are socially necessary, but dangerous to health, he argues that persons who are predisposed to certain diseases and particularly tuberculosis, should not be allowed to enter them.

The chapter on the Widow and Orphan is particularly interesting. The adult male worker is supposed to be able to earn enough for a family. When the husband is removed the same burden rests upon the widow. But she is forced to compete with women who are struggling to support themselves only, and often are simply working for pin money. But the mother is a social servant discharging a State function. Therefore she should be supported by the State. The only alternative is to place her children in an institution and oblige her to support herself as if she were a spinster. At this point the author's use of statistics is open to criticism. He wishes to show how numerous is this class of widows with young children dependent upon them, and says that every eighth woman over the age of twenty is a widow. This is true, but it proves nothing. There are no statistics to show how many of them have young

children. As a matter of fact, a large proportion of them are in the upper age groups, where the children should be an economic asset and able to support the mother.

In the chapter on Old People and Children the usual arguments in favor of the State feeding of school children are given but considered as insufficient. "But the argument for school dinners rests on a more positive idea. Children who are hungry must be fed; but in any case it is good for them to be fed at school. The school dinner is an education in citizenship. Without a word being said, the child gradually absorbs a knowledge of its own dependence on and place in social life. He finds himself a guest at the common table of the nation." This is exactly the point. There is grave danger that he will look to the State to provide his meals for him when the school days are over.

There appears in places a tendency to overstatement. Thus in speaking of the Charity Organization Society the charge is brought that its policy is to "assume throughout that the conditions of our social and industrial system are satisfactory enough, and that when failure occurs the fault is to be found not in the circumstances but in the character of the person who fails." While few who give of their time and money to this work are revolutionists, yet I suspect that most of them would admit that many applicants for relief are brought to their unfortunate condition through no fault of character.

The historical treatment in the book is admirable, and the entire volume is interesting and suggestive, yet most social workers would probably be unwilling to admit that the State ought to hasten to enter many of the charitable fields which are at present satisfactorily filled by private workers and voluntary organizations.

WILLIAM B. BAILEY.

Yale University.

Gold, Prices, and Wages under the Greenback Standard. By Wesley C. Mitchell. Berkeley, Calif.: University of California Publications, 1908—pp. xv, 627.

This study does not profess to be complete. The author has directed the compilation of a great mass of statistical material which it is his declared purpose at some later date to interpret more fully. Meanwhile, the work thus far done is set forth, partly in a statistical appendix, which fills more than half the volume, and partly in the form of selected data with running comment and explanation.

Of his method of study something should be said. The purpose of the work is not a study of the general price level directed to finding the effects of inflation in lowering the value of the paper money issues, but has a broader purpose. It aims to present, not merely an average effect but the diverse and various effects of the greenback issue. Hence, the index number of general prices does not constitute sufficient data for the study. Accordingly, the author has compiled what he terms tables of deciles for prices, wholesale and retail, and for wages. To form these tables (for example, of wholesale prices), he makes 1860 a standard year, reckons the price of each article in 1860 as 100 and its price in succeeding years as a percentage of its price in 1860. Thus, in 1865, the price of an article which had risen greatly might be represented by 470, and the price of another article by 95, the latter having fallen. The prices therefore are all relative to those of 1860. The question is not whether the price of one article is higher than that of another, but whether it has risen more (is higher compared with the price of the same article in 1860) than the other. On this basis the different relative prices for each period are arranged in series. These series are then divided into tenths (hence the term decile) and the relative prices at the dividing points are used in making the tables and charts. The fifth price from either end is therefore a median.

While this particular investigation is facilitated by the use of deciles instead of an index number computed as an average, the author is hardly justified in lending his assent to a general criticism of arithmetic means. "Objection," he says, "has frequently been made to arithmetic means as a form of average for index numbers on the ground that while relative prices may rise thousands of points above 100, they cannot fall more than 100 points. An advance on the part of one series to 500 points may well be regarded as less remarkable than the fall of another series to 20; but the first change would exercise far more influence on the arithmetic mean than the second."

The fact is, that if one is using index numbers to determine the relation of the level of prices to the volume of currency, this is just the way they should be influenced. A rise of one price fivefold, if prices are equal at the start and if quantities sold are equal, involves the use of a great deal more of currency than is saved by the fall of another to one-fifth. Hence, other things equal, it implies a greater supply of money or a fall in other prices. If it

means a corresponding fall in other prices, a properly constructed index number would show no change. If it means a greater supply of currency with the same volume of business, the index number *ought* to be affected, and to say that it is is no criticism.

The author reaches some very interesting and suggestive conclusions. It appears that the fluctuations in the greenback price of gold were much more moderate than the *extreme* fluctuations in the prices of commodities. Nevertheless, during the war gold moved up and down much more rapidly than the mass of commodities. These followed the up and down fluctuations of the price of gold, but more slowly. Wholesale prices, again, show a greater variability than retail prices or than wages.

For the study of the effects of the paper standard on the economic status of wage-workers, weighted deciles were taken of the relative prices, each being weighted according to the sum spent for that factor by the average family. When the figures for the cost of living were thus compared with the figures for the price of gold, it was found that as the simple deciles had risen and fallen more slowly than the premium and had not fallen so far, so the weighted deciles, representing the cost of living, rose more slowly than the simple deciles, did not reach so high a point, declined more slowly and did not decline so far.

On the whole, the discussion is clear and it is suggestive, even where not complete. The charts and tables, especially, and the tables in the appendix, should prove themselves valuable data for continuance of the investigation along the same lines.

HARRY G. BROWN.

Yale University.

Human Nature in Politics. By Graham Wallas. London: Archibald Constable & Co., 1908—pp. xvi, 302. Price, 6s.

This work is a philosophical inquiry by a practical politician into the nature of the forces that shape politics. Books of this class are rare. Few men have the combination of abundant knowledge with power of expression required to produce them. Hence they possess unique value.

The work is in two parts, the first of which may be characterized as a schedule of the bankruptcy of Liberalism as a political philosophy, and the second as a consideration of the possibility of obtaining from science a new system to take over the assets and continue the business as a going concern. The first part is, of course, more

solid and complete. It deals with facts which Mr. Wallas illustrates from his own experience. The second part, which speculates on what might be, seems to be a groping in the fog to find a way out. But he does not claim that it is anything more than that. All he contends is that the fog is there and that the exploration is inevitable. He is on his guard against illusions, recalling Napoleon's warning of the pitfalls awaiting ideologues who see things as they wish them to be. He remarks that "if our imaginations ever start on the old road to Utopia, we are checked by remembering that we are blood-relations of the other animals, and that we have no more right than our kinsfolk to suppose that the mind of the universe has contrived that we can find the perfect life by looking for it." If bees should attain self-consciousness, and have dreams of political progress, nevertheless "as long as they were bees their life must remain bewildered and violent and short." Such reflections suggest to Mr. Wallas that perhaps no great improvement in politics is possible until we have altered the human type itself "through the hazardous experiment of selective breeding."

While Mr. Wallas is vague in dealing with what might be, his vision is distinct and clear in considering things as they are. He says (p. 15) that "many of the more systematic books on politics by American university professors are useless" for lack of grasp on reality. The advocates of direct primaries would do well to ponder his remarks on the futility of putting upon the people political tasks beyond human capacity. He mentions (p. 224) that in his own case he found it impossible to "give the time necessary for forming a real opinion on fifteen candidates" in a borough election, so he solved the problem by voting a "straight ticket." He is well aware that this meant that the successful candidates were really the appointees of party managers, and he draws the conclusion that in order that elections shall really elect they shall be few in number and concentrated in effect. Multiplication of elections, instead of increasing control of government by public opinion, destroys it. Mr. Wallas correctly attributes to this cause the prevalence of graft in American politics. In England the present tendency is to reduce the number of elections. Mr. Wallas (p. 226) says that "since 1888, parliament, in reconstructing the system of local government, has steadily diminished the number of elections, with the avowed purpose of increasing their efficiency." In this country we are multiplying them. The avowed purpose of the direct primary

system is to strike down bosses and to extirpate corruption by giving the people the means of selecting good men for party offerings of candidacy. But results do not conform to the intentions with which causes are set in operation; they are always determined by the conditions that are actually established. Hence by increasing the complications and by adding to the expense of elections the direct primary system is certain to enlarge professional control of politics and to intensify corruption. It may be set down as an axiom of politics: the greater the number of elective offices, the greater the cost of government. The blunders now made in this country would hardly be possible were it not that political science has been eclipsed by sociology, and what Mr. Wallas characterizes as "non-rational inference" is in vogue. People who mistake feeling for thinking, and who thus impute to their projects the merit of their motives, may find in Mr. Wallas' chapter on "Representative Government" therapeutic aid such as their case requires.

HENRY JONES FORD.

Princeton University.

Writings of George Washington. Edited with an Introduction and Notes by Lawrence B. Evans, Professor of History in Tufts College. New York: G. P. Putnam's Sons, 1908—pp. xxxiv, 567. Price, $2.50 net.

"This is the first volume of a new series, *Writings of American Statesmen,* the purpose of which is to present in convenient form the most important writings of our most important statesmen."

It is altogether fitting that Messrs. G. P. Putnam's Sons should be the publishers of this series. The elaborate editions of the writings of so many of the founders of the American republic, which this firm has brought out, are an indication as well as a guarantee of the character of this new venture. The texts of the documents in the present volume are taken almost entirely from W. C. Ford's edition (G. P. Putnam's Sons), and the volumes of the writings of the other statesmen will doubtless be taken from the corresponding editions by this firm.

To put in five hundred and sixty octavo pages "the most important writings" of Washington is necessarily a matter of selection, and the selection must depend upon the editor's personal judgment as to what is most important. It is by way of explanation rather than of criticism to say that the editor has taken the conventional view of Washington and his work. He has accord-

ingly made selections from his writings which would appeal to most readers and has omitted some documents which another interpretation would wish to include. The volume will be found serviceable as a source-book for school and college use, furnishing illustrative material upon the life and times of Washington; but there is nothing in the writings themselves, nor in the introduction, that could be regarded as a contribution to the study of Washington.

The footnotes are not extensive, but they have been carefully prepared and are helpful. They include many extracts from letters to and by Washington, supplementing the text. A fairly good index of seven pages completes the volume.

MAX FARRAND.

Yale University.

RECENT LITERATURE.

A History of the English Agricultural Labourer. By W. Hasbach. Newly edited by the author and translated by Ruth Kenyon, with a preface by Sidney Webb. London: P. S. King & Son, 1908—pp. xvi, 470. Price 7s. 6d. net. "It can hardly be considered a credit to England,"—so Mr. Webb begins his preface,—"that it should have been left to a foreigner to write the history of the English agricultural labourer." So long, however, as the spirit of the English history schools remains what it has been, and the movement toward a broader conception of history, exemplified in the work of the Webbs and organized by the London School of Economics and Political Science, has to struggle against the dominant academic ideas on the subject, the English must be content to accept accounts of their own development and institutions "made in Germany." The London School has chosen wisely in including in its series of studies the translation of the monograph by Hasbach which first appeared in the Schriften des Vereins für Socialpolitik in 1894. The original version has been revised throughout, in some places considerably enlarged, and brought down to 1906, by the author. It is by far the best book on the subject treated. The first three chapters cover the history of the English agricultural laborers from the later Middle Ages to the reform of the poor law in 1834 (the development of a free laboring class, the development of an agricultural proletariat, the demoralization of the laborer); later chapters describe changes in the nineteenth century, with special consideration of agricultural labor unions, and the small holdings movement. In a final chapter the author presents his conclusion (very properly questioned by Mr. Webb), that the only wholesome issue from present conditions lies in the reunion of land and labor in small and medium holdings. The value of the book to students is greatly enhanced by a classified bibliography of some thirty pages.

History of the Bank of England. By A. Andréadès. Translated by Cristobel Meredith, with a preface by H. S. Foxwell. Two volumes in one, 1640-1903. London: P. S. King & Son, 1909—pp. xxxix, 455. Another illustration of the dependence of the English on foreign scholarship, more striking than the preceding, is furnished by the present volume, which was written by a Greek, now professor of political science in the University of Athens, and was first published in a French version in 1904. This

book was welcomed by scholars on its appearance as the best single history of the Bank of England. It did not supplant previous studies on special periods and special aspects of the long career of the Bank, but in offering a consecutive history of the Bank, informed by sound scholarship and sober judgment, it furnished something for which there was and still is no substitute. About half of the book covers the history of the Bank up to the Restriction Act of 1797; the remainder is devoted to the nineteenth century. A bibliography of seventeen pages is appended.

Economics, Briefer Course. By Henry Rogers Seager. New York: Henry Holt & Co., 1909—pp. xii, 476. The theory of the historian Freeman, that the way to write a good small book is first to write a larger one on the same subject, receives support from the present volume. Seager's Introduction to Economics has been widely used, because of its excellent treatment of the subjects of applied economics, and in spite of irritating faults, of form rather than of substance, in its treatment of economic theory. The Briefer Course, as one scans its pages, seems to have kept the best of the larger book, and to have shaken off a considerable part of the weight under which it labored. The chapters on economic history, which were purely perfunctory, have been dropped, as have also the chapters on public finance. These omissions amount to about one hundred pages; and about another hundred have been saved by condensation of the chapters which are retained. The result is a book which is well adapted to use in a briefer course of economics and which may in many cases be found more serviceable than the author's larger Introduction.

An Outline of Economics. By John Daniels, A.M. Boston: Ginn & Co., 1908—pp. v, 28. Price, $0.40 net. This little book amounts, in form and substance, to a synoptical table of contents of a course on economics which the author gave before the Boston Young Men's Christian Association. To those who attended this course the book will doubtless be of value; it is hard, however, to see how it can serve the other purposes (five in number) which the author indicates for it. An ordinary man does not want the table of contents without the book, and if he has a book he will find its own table of contents more useful than another. The book, furthermore, is open to serious objections. On the first page the following points strike the eye. Value is defined by reference to

its causes (utility and limited demand), without mention of the all-important result, efficiency in exchange. "The exchange of commodities constitutes a Market." "Exchange Value must be an averaging of and approximation to the many values in use of the commodity."

Les Travaux Publics et les Transports. By C. Colson. Paris: Gauthier-Villars, 1907—pp. 527. This book is the sixth and last volume of a course of lectures on political economy given at the Ecole Nationale des Ponts et Chaussées. The first four volumes are concerned with questions, more or less general, within the field of economics, while the fifth deals with the subject of public finance. In the sixth volume, an application is made of the economic doctrines previously set forth, to the questions involved in the matter of public works and transportation. The author develops, with the aid of numerous examples, the results of the different lines of conduct which can be followed in organizing and administering the transportation systems. Usually the illustrations of principles are drawn from conditions existent in France, although, by way of comparison, the legislation and practices adopted in Germany, England, and the United States are frequently referred to. Particular attention is given to the theory of rates, and to the conditions of competition and combinations between different lines.

Die ökonomische Bedeutung der Technik in der Seeschiffahrt. By Hermann Justus Haarmann. Leipzig: Werner Klinkhardt, 1908—pp. 107. This is the second volume in a series of technical economic monographs edited by Dr. Ludwig Sinzheimer, lecturer in Political Economy in the University of Munich. The work, which makes no claims to being exhaustive, is divided into two parts, dealing respectively with the direct and indirect consequences of the evolution of technical knowledge upon water transportation. Part One is concerned chiefly with the later history of the development of the vehicle of water transportation, particular attention being given to such matters as the increase of the carrying capacity of vessels, speed, and safety—advances made possible by the progress of science in comparatively recent times. Part Two is given up to a discussion of the equipment of vessels and to the change due to modern methods and conditions in the function of those who operate them. Other studies in the same series already published or in preparation relate to the sugar, glass, watch, brick, chemical, milling industries, etc.

Constitutions and Documents illustrative of the History of France, 1789-1907. By Frank Maloy Anderson. Second edition, revised and enlarged. Minneapolis: The H. W. Wilson Co., 1908—pp. xxvii, 693. It is a hopeful sign that Professor Anderson's collection of documents, published first in 1904, has passed already to a second edition. In the selection, translation and editing of the documents Professor Anderson has shown admirable judgment and care, and he has provided teachers of recent political history with a most useful instrument for class work. The new edition has been revised in details, and contains in its additional material some interesting documents on the recent separation of Church and State.

The King's Revenue; being a Handbook to the Taxes and the Public Revenue. By W. M. J. Williams. London: P. S. King and Son, 1908—pp. xvi, 221. As its title indicates, this is a reference book of facts and figures relating to the revenue system of the United Kingdom. The introduction contains a brief analysis of the revenue system as a whole. The several sources of revenue are then treated in separate chapters. Each chapter is divided into three sections, which give respectively the history of the tax, the present rates at which it is imposed, and the figures of its yield together with other statistical data. The book is largely a matter of schedules and statistical tables. The historical sections are little more than an outline of the several acts, with an occasional sentence as to causes or results. The statistical material is quite full and detailed, and covers as a rule the twelve fiscal years 1896-7 to 1907-8. This book will be a valuable addition to the reference library of the student of public finance, particularly in America, where the material it contains is not always easily available.

L'impôt progressif en théorie et en pratique. By Edwin R. A. Seligman. Translated by Ant. Marcaggi. Paris: V. Girard et E. Brière, 1909—pp. ix, 348. This is a translation of Professor Seligman's "Progressive Taxation" (Pub. Am. Economic Assn., IX, 1-2, 1894). Some additions to the original have been made by the author, including, for instance, the recent laws of Oklahoma on local taxation. Few American investigators have won from foreign economists the recognition repeatedly accorded to Professor Seligman.

The Course of Average Prices of General Commodities in England. Compiled by Augustus Sauerbeck. London: P. S. King &

Son, 1908. This publication aims to trace the course of average prices in England from 1818 to 1907 inclusive. It is based, for most of the period, on forty-five principal commodities. The publication consists of a chart with an accompanying table and explanatory notes. At different points on the chart opposite the respective years of their occurrence are mentioned facts partially explaining the rise and fall of the curve.

Modern Constitutions: A collection of the fundamental laws of twenty-two of the most important countries of the world, with historical and bibliographical notes. By Walter Fairleigh Dodd. Two volumes. Chicago: University of Chicago Press, 1909—pp. xxiii, 351; xiv, 334. Price, $5.42 postpaid. This work covers the field indicated in the title. Great Britain is omitted. Other countries are represented by a careful translation of their constitutions in force in 1906. An alphabetical subject-index, as well as the notes and bibliographies, add to the value of the compilation.

Comrades, A Story of Social Adventure in California. By Thomas Dixon, Jr. New York: Doubleday, Page & Co., 1909—pp. xi, 319. It is but seldom that fiction is noticed in this REVIEW; but the case against socialism is so amusingly worked out in the history of the colony on Ventura Island that this story deserves mention in the literature of the subject. Especially interesting are the interrogations of one human question-mark whose genius for putting awkward queries is something more than diverting.

Due Secoli di vita agricola: Produzione e valore dei Terreni contratti agrari, salari e prezzi nel Vercellese nei secoli XVIII e XIX. By Salvatore Pugliese. Milan: Frat. Bocca, 1908—pp. v, 433, 70. The five hundred pages of text and tables cover particularly the population, prices, wages and standards of living in Vercelli during the past two centuries.

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